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ART. I. *Philosophie de Kant, ou Principes Fondamentaux de la Philosophie Transcendentale*, &c. The Philosophy of Kant, or, the Fundamental Principles of Transcendental Metaphysics. By Charles Villers, Fellow of the Royal Society of Sciences of Göttingen. One large volume 8vo. Metz, 1801. Sold by De Boffe, London.

HOWEVER numerous the states, into which the great boundaries of nature, or the commerce of policy and of the sword, have divided the human race, it has been a customary form of thought to consider the sciences as refusing every geographical barrier: and we have heard of the republic of letters, till we almost believe it to exist. Amid those desolating hostilities, which represent man only as the enemy of man, there is a relief in this innocent cosmopolitanism, that atones in some degree the violence of national animosity; and we willingly forget, that the great Republic, one and indivisible, has in truth almost as many divisions, with mutual jealousies and mutual ignorance, as the political relations which it comprehends. It is not merely for the works of *the immortal Ilixofou*, as in the apologue of Goldsmith, that a traveller from the Chinese wall may ask in vain. There are in every country names as illustrious, which have been stopped, in the progress of their glory, by the unfortunate position of a mountain or a river; and though we will not say with the commentator of Kant, that it is as difficult for *any good book*, as for the whole Austrian army, to effect the passage of the Rhine, a *system of metaphysics*, we will readily allow, is of almost as difficult transportation; nor would it have surprised us more, had the head-quarters of the Archduke Charles been fixed at Paris, than if, in persevering attendance, on the sage of Königsberg, the experimentalists of the institute had abandoned their physics, and the gayer literary assemblies, their romances and their epigrams, for the study of *transcendental æsthetics*, and all the refinements and abstractions of *pure reason*. The tardiness with which the discoveries of Newton, so simple, and so important, and so readily corresponding with the general habits of science,

were adopted in that large province of the literary republic in our immediate neighbourhood, is well known; and we therefore feel no astonishment, that the glory of illuminating his countrymen, in *purisms* and *supersensibles*, should have been reserved for M. Charles Villers, in the 9th year.

Of the very doubtful reception which awaits a work, on a subject so little in unison with the habits of Parisian literature, its author is fully aware. The nature of those habits he discusses at great length, and contrasting them with the more metaphysical turn of thought which prevails on the opposite bank of the Rhine, attempts to explain the difference by the force of literary primogeniture. Philosophy and the belles-lettres still assert their peculiar claim, where the rights of each were earliest allowed. In France, the inquirer into causes and effects came in late succession to the poet and the novelist: in Germany, the poet and the novelist succeeded the sage. The one country had already produced works of elegance, which were valued as classics by all Europe, when, to the greater number of its writers, the sciences were almost unknown. These formed the glory of more northern states, which could boast of eminence in every branch of philosophy, when, in literature, their praise amounted only to length of commentary and extent of erudition. We fear, however, that an explanation of this kind rather admits the difficulty, than removes it. We are told to look back to a distant age, but we gain no light from the review; for, if we must admit a greater tendency in France to the belles-lettres than to the severer studies, it is as easy to admit it without a cause at present, as at any former period; and if any other cause exist, it is absurd to ascribe the difference to mere chronologic dates. Celebrity will, indeed, excite to imitation; but the celebrity must have been first acquired. Nor, if it were true that the genius of a nation could be traced to its *ancient* fame, would a French metaphysician have much to dread. He would address a people, whose early habits were similar to his own, who, in the ages of scholastic glory, as M. Villers himself confesses, attracted the disputants of every nation, by the exquisite subtilties of their own distinguished schoolmen, and who aspired to the empire of the gayer and softer feelings, only after they had perplexed, in idle, but ingenious controversy, the profoundest thinkers of Europe.

The fact, however, whatever be its cause, is certain. It is not in France, in its present sensualism of taste, that the love of abstract metaphysics can speedily be revived; and there is reason to fear, that even in England, the reproach, if it be allowed to be a reproach, is in a great measure deserved. We are, indeed, less disposed to ridicule a science, because it is necessarily subtle, and has often been abused in fantastic refinements; but we are content to be dully indifferent, and can hear of a system

which has divided into patrons and opposers the whole thinking part of a large empire, without any public curiosity to become acquainted with its merits, or to know enough, even of its imperfections, to comfort ourselves with the certainty that our neglect of it has been deserved.

The illustrations which we are about to review, are dedicated to the National Institute of France, 'as the Tribunal invested with Supreme Jurisdiction in the Empire of the Sciences.' Since the late revival of Roman titles, by the consuls, senators, and prefects of the French, we have been so much accustomed to magnificence of official designation, that we are not astonished at any pomp which may be assumed within the outline of their own map. But when, in a work of strict science, the author becomes so poetic in his adulation, as to raise imaginary empires, and give away their best offices to any patron who may choose to countenance his book, we cannot refrain from asking him, by what commission he has derived that right? *The supreme jurisdiction of the sciences*, it certainly is not in the power of M. Villers, or of his bookseller, to bestow; and the nomination does not come with a very good grace from him, who has spent a large part of his work in proving, that the French are any thing but men of science. It is but an awkward and unfriendly dilemma, to which the great theorist is reduced by his foreign commentator. He must either receive the approbation of a society, which confessedly has yet to acquire the habits of abstraction necessary to the just appreciation of his doctrine, or, if he do not receive it, he must submit to see that doctrine condemned by the supreme court of Science, from whose decision there is no appeal.

In a long preface, some particulars are given of the life and works of the philosopher of Königsberg. He is represented as having never withdrawn, in a life of nearly eighty years, from his native city, contenting himself, in the true simplicity of a sage, with the occupations of study, and the society of a few favourite friends. It is not merely as a metaphysician, that he claims to be considered; for there is scarcely a science which he has not endeavoured to illustrate. 'He is a metaphysician, an astronomer, a chemist: in natural history, in physics, in physiology, in history, in languages, and literature, and the arts; in all the details of geography, as they relate to the exact situation of the parts of the globe, their inhabitants and productions—every thing is familiar to him.' His commentator, zealous for his fame, contends that the planet *Herschell* ought rather to have been known to astronomers under another name; as, twenty-six years before the discovery of that portion of our system, its existence had been predicted by Kant, in some 'conjectures on the heavenly bodies which probably exist beyond the orbit of Saturn,' published in 1755, in a work entitled 'The natural history of the world, and theory of the

heavens, on the principles of the Newtonian philosophy.' His conjecture was founded on the progressive increase of eccentricity in the orbits of the planets, according to their distance from the sun; from which he conceived it necessary to the harmony of the system, that, to prevent the sudden disproportion, there should be other orbits of progressively increasing eccentricity between Saturn and the least eccentric of the comets. The first traces of that metaphysical system, which has given such celebrity to his name, are to be found in his inaugural dissertation *De mundi sensibilis atque intelligibilis forma et principiis*, written in 1770, when he was appointed to a professorial chair in the university of Königsberg. But it was in 1781 that the full development of its principles appeared in his **Review of pure Reason*. This celebrated work was nearly six years published, before its importance was at all understood: and it is perhaps one of the most striking instances of the reverses of literary fortune, that the bookseller by whom it was published, was about to destroy the copies as waste paper, when a sudden demand required and exhausted rapidly three new editions. The doctrine was soon presented, under innumerable forms, by a multitude of commentators; among the earliest and most distinguished of whom were Rhinhold, the son-in-law of Wieland, and the mathematician Schulze. Of its subsequent fortune, it is needless to speak. Though we know little more of Kant, we at least know, that his system had, in almost every philosopher in Germany, either an avowed partizan, or an avowed antagonist: but the English reader, better acquainted with the poets of that country than with its philosophers, will be surprised to learn, that he has enjoyed the benefit of this ponderous system, even in the lightest of his readings. With Schiller and Göthe we are all acquainted; and Schiller and Göthe are adduced as instances of poets, who have made to their delightful art 'a happy application of the principles of the transcendental philosophy.' We wish that the nature of this application had been more particularly pointed out; for to us the study of mathematics appears as well fitted for giving poetic inspiration, as the study of the categories. To think with passion, we must have adopted an external world, and diffused animation over it. It is the *empirical* and *transcendent* philosophy, therefore, which alone can suit the poet; and these are the very systems which it has been the laborious endeavour of Kant to overthrow.

We shall now proceed to give a short view of the opinions of this celebrated theorist; at the same time premising, that we

* The German title of this work is *critik der reinen vernunft*; and the system it contains is commonly known under the very absurd name of the *critical philosophy*, which, at least to an English reader, is very little significant of the peculiar process of thought it is intended to denote. The *self-reviewing* philosophy would have been a term more diagnostic. But the other term has now almost prescriptive right; and we have therefore retained it in the dissusion which follows.

are unacquainted with his original works, and that the justness of our sketch, and consequently of our own objections, must therefore depend wholly on the fidelity of his expositor. To prepare this short view, from the work before us, has been a task of no easy labour: for M. Villers, probably in the hope of gaining over the lighter fancy of his countrymen, has had little mercy for the methodical habits of sober and contented investigation. In his *preliminary remarks*, which occupy much more than half the volume, he has thought it necessary to intermix, with short and broken portions of the system, a perpetual episode of declamation on every incidental subject. There is no attempt to develop, in regular order, the parts of a great whole. After being made acquainted with the divisions of *empiricism* and *rationalism*, and the superiority of *transcendental* views, we are led away, by a simile or a metaphor, to the crimes of mobs, and encyclopedists, and guillotines; to the saving virtues of the armies and the emigrants; and to the still more powerful atonement of that great* Apollo of the Thuilleries, by whom the Python of Jacobinism was slain. To many of these digressive passages, it is impossible to deny the praise of that diffuse species of eloquence, which often pleases us, in the allusions to the same period of dreadful interest, that are interspersed in the later writings of Laharpe. In literature, however, we can read, and pause, and return. But in a work of severe investigation, which professes to introduce us to a new system of the principles of all human knowledge, a simple statement of the doctrines it includes, in that exact and regular series in which they rise from each other, would, to us, have been much more satisfactory, than all the ornaments which the richest and most rhetorical imagination could supply.

Philosophy, in relation to the process which it adopts, is considered by Kant as of three kinds. It is *dogmatical*, when it founds a system on principles assumed as certain; *sceptical*, when it shews the insufficiency of those principles which the dogmatist has assumed; and *critical*, when, after adopting the objections of the sceptic, it does not rest satisfied with doubt, but proceeds to inquire, from what principle of our nature the illusions of the dogmatist have arisen, and, by a minute analysis of the *cognitive powers* of man, traces the whole system of his knowledge through all the modifications of its original *elements*, by his *independent and fundamental forms of thought*. It is in this analysis, that the spirit of the critical philosophy is to be found; and till the pro-

* Période de boue d'impiété et d'inhumanité, d'où devaient résulter tous nos maux! Limon infect où devait prendre naissance le *Python* jacobin!—Mais respirons celui qui devait le terrasser a paru. Les mœurs, la pudeur et les chaste Muses retrouvent en lui leur soutien; et l'antique *Apollon* de l'art, arrivé au même tems semble n'être qu'un symbole dans la capitale de la France. p. 165.

cess have become familiar, the whole system must appear peculiarly unintelligible: but, when the reduction of all our feelings to their objective and subjective elements is well understood, though we may still be perplexed by the cumbrous superfluity of nomenclature, we are able to discover, through the veil that is cast over us, those dim ideas which were present to the author's mind. According to Kant, then, it is necessary, in investigating the principles of knowledge, to pay regard to the two sets of laws, on which the nature of the *object* and of the *subject* depends. It is from their joint result, as directing the *influence* of the thing perceived, and as directing the *susceptibilities* of the percipient, that knowledge, which is thus in every instance *compound*, arises: and this compound of objective and subjective elements might be modified equally, by the change of either set of laws; as the impression of a seal may be varied alike, by a change of figure in the gem, or by a difference of resistance in the parts of the wax, which are exposed to its pressure. The subjective elements are by Kant denominated *forms;* and each function of the mind has its peculiar forms, with which it invests its objects, uniting with them so intimately, as to render apparently *one* that feeling, which cannot exist but as *combined* of different elements. Nothing therefore is known to us, *as it is:* since we acquire the knowledge of an object, only by the exertion of those laws, which necessarily modify to us the real qualities of the object known. Philosophy, therefore, in relation to its belief of external things, is *empirical* when it believes them to exist exactly as they appear to us in each particular case; it is *transcendent*, when, using reason to correct the false representation of the senses, it believes that the objects of our senses exist in a manner *really* known to us, after this correction, though different from their immediate appearance in particular cases. In both these views it has relation only to their *objectivity*, or to their qualities as independently existing in themselves; and is therefore erroneous, as those qualities cannot be discovered by us. It is *transcendental*, when considering them in relation to our own powers, it investigates the *subjective elements*, which necessarily, in the exertion of our independent laws of cognition, modify the qualities or elements of the object as perceived. Since it is thus impossible to know the *world as it is*, we must content ourselves with the knowledge of the *phenomenal world*, and with that *reality* which is merely *subjective*. The system of our world is thus *idealism*, but an idealism in which we may safely confide; though we must be assured of erring, whenever we ascribe to it *objective certainty*. There exists, however, an independent system of *noumena*,* or *things in them-*

* This word is evidently an abbreviation of the Greek νοουμενα, which in our opinion, would be much more applicable to external things, *after* they had under-

selves, though we cannot know them as such, from the unavoidable modification of every *objective element*, by our own forms of cognition. To determine what is subjective in each peculiar perception, the nature of the *subject* must be investigated. This subject is *self*, the being to which we give the name of I, when we say, *I* know, *I* will. It has three great faculties; *cognition*, by which we know; *volition*, by which we act; and *judgment*, which is in some measure intermediate, being neither wholly speculative, nor absolutely practical, but determining to action, and thus forming the bond of our knowledge and our will.

Pure cognition is divided into *pure sensibility*, *pure* * *intelligence*, and *pure reason*; the products of sensibility being *sensations*, the products of intelligence *conceptions*, and the products of reason *ideas*. This division is not inconsistent with the absolute fundamental unity of the cognitive being, that unity, of which we are conscious in all the diversity of our feelings, and without which *we* could not exist. The threefold action is even in some measure aided by the unity itself; for, from a law of our nature, we strive, by a perpetual synthesis of comparison and arrangement, to bring the diversity of our sensations, as nearly as possible, to the oneness of which we are conscious in ourselves.

Pure sensibility, comprehending all those feelings in which *space* and *time* are involved, is *external*, when it refers them to space, and *internal* when it refers them to time. In itself nothing is *larger* or *smaller*, or *before* or *after*; for space and time, the *forms of sensibility*, by which *a subjective world* arises to us, are not, in any degree, objective and real, but are modes of *our own* existence as sentient beings. It is impossible for us to imagine any body, which does not exist in space: it is impossible for us to imagine any feeling which does not exist in time. With the abstraction of these, every thing to us perishes; but the certainty of space and time remains with us, though every object were conceived to be annihilated. Hence, space is an indispensable condition of the possibility of bodies, but bodies are not necessary to the possibility of space. That it exists in ourselves *a priori*, and independently of experience, is shewn by the impossibility of acquiring it from without. Space includes three dimen-

gone the *forms* of our *cognition*. If the terms must be adopted, we should be inclined to reverse the use of them, and call a *phenomenon* whatever affects the external sensibility, and *noumena* the subsequent *compounds* of perception.

* The original term is *verstand (entendement)* which may be more simply translated *understanding*; but the term we have chosen, which is merely the Latin corresponding word with an English termination, however singular its use may at first appear, is preferred by us to its more common synonym, from the very circumstance that it is less common. In the use of a term to which we have been long accustomed, there is much danger of error, when the limitation of its meaning is not precisely the same, and *understanding*, in its usual acceptation, is significant, not of a single function of the mind, as in the transcendental vocabulary, but of the union of all the intellectual faculties.

sions. Sight, smell, taste, hearing, are evidently incapable of affording these: nor is touch, to which Condillac ascribes its origin, more susceptible. We gain the idea, says he, when our hand passes over a surface; but he has already supposed a surface and a hand; and what resemblance is there of a simple feeling, to a body of three dimensions; nor can space be supposed to arise from abstraction, for by abstraction we separate only simple qualities: but space is not a simple quality, capable of being perceived separately in bodies; it is the necessary condition of their existence, implied, in the first perception of the infant, which supposes an object external to itself. In every sensation there must be elements both objective and subjective: the subjective must be permanent as ourselves, the objective fleeting as the occasion. Space, therefore, being invariably present amid all the apparent changes of quality, is subjective in *us*; occasioned indeed by the sensation, and rising *in* it; but not an objective part of it, depending on *experience*. If that were its origin, we should be allowed to conclude, only, that all the bodies yet known to us are extended, and not that all bodies must have extension. Yet the certainty of this we believe with equal force; since, space being a subjective condition of knowledge, we feel that every impression, by a law of our nature, must be invested with its *form*. On this, the *apodictic* or demonstrative certainty of geometry depends: for, as pure space is the form of the external sensibility of all men, the *extensive properties* of pure space must, to all men, be the same. It is a peculiar distinction of mathematical ideas, that they consider not *intensive* but *extensive qualities*, all the degrees of which are equally capable of being rendered sensible, so as to correspond exactly with a sensible object. Of degrees merely intensive, as of the varieties of *force* in physics, and of *benevolence* in ethics, no delineation can be given.

The *internal sensibility*, by which we discover our own mode of being, with all the changes that take place within us, gives us the idea of time, in the succession in which it represents to us our feelings. All the arguments which prove space to be a form of our cognition, are equally applicable to time. By this, we invest our internal affections with succession, as we created to ourselves a subjective world by the investiture with space. From succession we derive our idea of number; and time being, like space, an universal form, the apodictic certainty of arithmetic is easily explained.

If we had sensibility alone, the world would be merely a number of detached beings; it would not be that great whole which we call *nature*. This is produced to us by *intelligence;* that power, which, receiving the products of sensibility, establishes their relations, and arranging them in classes, forms *conceptions*. As in sensation, there are the necessary forms of space and time; so are there necessary forms of intelligence, to which Kant, adopting the

well-known term invented by Aristotle, gives the name of *categories*. These are reduced to four orders; *quantity, quality, relation*, and *modality*: To the first of which belong the categories; 1. *unity*; 2. *plurality*; 3. *totality*: To the second, 4. *affirmation* or *reality*; 5. *negation* or *privation*; 6. *limitation*: To the third, 7. *substance* and *accident*; 8. *causation*, or the laws of cause and effect; 9 *reciprocity of action* and *reaction*: To the fourth, 10. *possibility and impossibility*; 11. *existence* and *non-existence*; 12. *necessity* and *contingence*. No act of intelligence can take place without the union of these four forms of thought, in some one of their modifications. Like space and time, however, they are no part of the object, but exist *a priori*, and independently of all experience in the subject who *intelligizes*. Thus, to take an instance from the categories of quantity, the idea of number cannot form a part of any object. We hear a sound; we again hear a sound; but, when we say that we have heard *two* sounds, we have invested a product of sensibility with a form of our own intelligence. These fundamental conceptions may be combined, so as to form other conceptions equally independent of experience; as when, from substance and causation, we derive the conception of *force*; or they may be united with the pure forms of sensibility; as when, from the addition of temporary succession to existence and non-existence, we form the conception of *commencement*. For determining to which of the categories our sensation belongs, there are four *forms* of *reflection*, corresponding with the four orders: for the first, *identity* and *diversity*; for the second, *conformity* and *contrariety*; for the third, *interiority* and *exteriority*, by which is meant the distinction of the attributes of an object as originally existing in itself, or as acquired from without; for the fourth, *matter* and *form*. These four *reflective conceptions*, though like the categories, existing *a priori*, differ from them, as not being applied to the *products of sensibility*, to fix their relations and mode of being, but to the *conceptions* of objects, to fix their appropriate place in the system of our knowledge.

Pure reason is the third mode of our cognitive faculty. It is applied to our *conceptions*, and is that which considers them as *absolute*. Its three great *ideas* are, *absolute unity, absolute totality*, and *absolute causation*. These become *objects* to us, or *ideals of pure reason*, by investing them with our own felt and fundamental unity; which individualizes absolute unity, as in the *human soul*, or absolute totality as in the *universe*; and the ideas acquired from *practical reason*, of absolute power and goodness, are, in like manner, individualized in *God*. Every act of *reasoning* implies an absolute idea. Thus, when we say, *all bodies gravitate, and the air, being a body, must therefore have weight*, the validity of our conclusion depends on the universality of the major proposition. To

these absolute ideas we are led, by an irresistible impulse of our nature towards infinitude. They are forms existing *a priori* in the mind; for our senses give us the perception only of that which is divisible, limited, caused. With the unity of the human mind, or the infinity of the universe, or the great source of phenomenal nature, no corporeal organ can make us acquainted.

Each of the cognitive functions having thus its peculiar forms, we are guilty of an *amphiboly*, when we ascribe to one the pure forms of another; as when, in the material atoms of the philosophy of Epicurus, we invest our external sensations with the idea of *absolute simplicity*; or when, adding to the same sensations the absolute idea of *causation*, we erect a theory of atheistic materialism. In like manner, the combination of absolute ideas with our internal sensibility, 'of which the form is time, and the general representation spirit,' gives rise to all those systems of spiritualism, which suppose a simple, unextended soul. The perplexing controversies on the divisibility of matter, are the product of a double amphiboly, which confounds sensation and conception.

The preceding summary comprehends the laws of cognition. But man does not exist to *know* alone. He wills; he acts; he is the subject of *practical reason*. The knowledge of his powers and his duties, he cannot acquire from external impressions on his sensibility, from any arrangement by his intelligence of the products of his sensibility, nor from the addition of the forms of pure reason to the conceptions of his intelligence. But man is known to himself by consciousness. All other beings he knows only subjectively. Himself, however, the sole exception in nature, he knows in objective *noumenal* reality. He has not, therefore, to reason, or apply those forms which belong to his conceptions. He has only to observe his own nature; and in it he feels that he possesses freedom of volition, because he feels that he is able to will: he recognizes a principle of duty which commands him, under the certainty of future responsibility, to act or to abstain. There are two imperious voices which say to him, *Be happy, Be virtuous*. In many cases, it is impossible to obey both. But the one is a voice of more rigid command than the other. It says not, *if thou wilt, if thou can*, like that which bids him be happy: it pronounces with legislative authority, *thou oughtest, thou must*; and self-contempt, and self-esteem, are the immediate punishment and reward with which it sanctions its will. His choice, however, is not constrained. He may prefer to duty the pleasures which are more immediate; but, in daring to disobey, he has already begun to endure the penalty. The duties commanded by this internal voice, are reduced by Kant to two maxims: *Regard constantly every reasonable being as an end in himself, and not as a mean of benefiting others*; and *act in such a manner, that*

the immediate motive of thy will might, with advantage, become an universal law in the government of all reasonable beings.* These laws exist *a priori* in the mind; and, therefore, are not subject to the laws of cognition. At the same time that we are conscious of their force, we discover the necessity of future reward and punishment, and, confident of immortality, 'we feel, in the sanctuary of our being, that, quitting this phenomenal world, we shall find virtue and happiness united in the world of *things in themselves.*' To responsibility, it is necessary that there should be a judge. This judge has absolute goodness; because from him, our ideas of the *just* and *good* proceed. Since all finite reasonable beings have the same practical reason, there must be *a supreme universal infinite reason*, which, manifesting itself to all, announces the same laws. 'This supreme reason, this absolute goodness, this judge, the rewarder of virtue, is God: not, indeed the God of speculation, *whose existence may be asserted or denied by arguments of equal force.* He is not the result of the ratiocination of man. 'He does not need to rest on the two premises of a syllogism, as the colossus of Rhodes stood elevated on its pedestals of rock.'† He is the true God, of whom no argument can deprive us; because, not having his origin in cognition, he is not subject to its forms; a God who is *not eternal, not* in *space, not* in *time, not* a *substance, not* a *cause*, and of whom it is not less absurd to say that he *exists*, than to say that he is *blue* or *square*.

In this short view of the principles of Transcendentalism, we have endeavoured, as much as possible, to avoid the perplexity of new terms. Of these its author has been profusely liberal; and to them he is probably indebted for a large share of that favour which his system has received. In minuteness of nomenclature, there is an appearance of nice distinction, which prepossesses us with respect for the acuteness of the inventor's powers: and as, in the infinity of objects which present themselves to our observation or fancy, the resemblances and dissimilarities are infinite, there are no bounds to the multitude of classes in which they may be arranged. The resemblances in a new system are, probably, as real as in those which preceded it; and we therefore think that we have made a large accession to our knowledge, because, by a new analysis and synthesis, we have combined the results of our former experience in a varied collection of terms. Of the doctrines themselves, considered independently of nomenclature, our opinion is very different from that of the admiring disciple, who now offers them to our veneration; and we are par-

* We have added the words *with advantage*. In the original, it is merely *may be such as to become an universal law (puisse devenir)*, which, if it be not elliptical, is wholly unintelligible.

† Il n'a pas besoin des deux prémisses d'un syllogisme pour se tenir debout, comme le colosse de Rhodes appuyé sur ses deux rochers. P. 159.

ticularly astonished, that, in the country of Leibnitz, their celebrity should have been so great. We see in them a forced combination of jarring principles, rather than a perspicuous and analysing originality of reflection. The self reviewer, who professes to examine with accuracy the first elements of his belief, doubts and asserts on the same principle; and, after having overturned the dogmatism of others with the most unbounded scepticism, and raised dogmatism anew, on the loose materials of that foundation which his scepticism had overthrown, he thinks that he has avoided the objections which may be urged against both, because he has given a new name to the combination of the two. In this manner, he has indeed made a partial attack more difficult, because he can intrench himself at will in either system: but his theory is not the less incoherent and feeble, when assailed as a whole. The merit of Kant appears to us to consist less in invention, than in occasional deductions from the opinions of others. It is that part of his system which may be considered as a commentary on the innate susceptibilities of Leibnitz, for which alone we consider the world as indebted to him: and perhaps, in the present circumstances of philosophy, even the extravagant length to which he has pursued a just principle, may have been of favourable influence. Against the more inviting system of *sensualism*, in which all knowledge is supposed to consist of original impressions from without, or of abstractions or new combinations of original impressions, which has spread so rapidly from the writings of the late French metaphysicians, and which charms us, even while we deny it, by its appearance of simple truth, a plain statement of the doctrine of anterior susceptibilities would perhaps have had little effect. It required a bolder enunciation of its force to surprise into discussion; and discussion, excited as it has been, in one country at least, to such enthusiasm of inquiry, will terminate, we trust, in the mutual correction of the errors of Condillac and of Kant.

In examining the validity of the doctrines of transcendentalism we shall follow the order in which they were stated.

The existence of a system, which is neither dogmatical in its first principles, nor altogether sceptical, it is impossible to admit. We demonstrate, only from something which we take for granted; and this first principle must be stated or understood *dogmatically*. The critical philosopher, it is said, goes along with the sceptic, in exposing the illusions of the dogmatist; but, if every principle assumed be dogmatism, with the sceptic he must also rest. To go farther, and inquire into the source of each illusions, is to do nothing more than dogmatize in a new way; for he must believe the illusion to have taken place, because a certain source of illusion existed, which he must demonstrate from some principle, acknowledged before, and therefore confessedly in need of support;

or from another principle which he assumes without proof. In what, then, does he differ from the theorists who have gone before him? All, at least in modern times, have been critical, as all have professed to examine the faculties of the cognitive being. Of this examination there are various degrees of accuracy, and the theory of transcendentalism may therefore be a better dogmatism than others; but still it is not distinguished by any new character, so as to deserve a peculiarity of name. In the mere belief of the subjectivity of perception, it certainly is not original; for it would be difficult to find a philosopher of the present age, who retains the belief of the actual unmodified representation, by the senses, of the qualities of external matter. In one circumstance, however, we differ from the transcendentalist. We own the subjectivity of our perceptions; but we are convinced of the impossibility of analysing them into objective and subjective elements; since to us, by the laws of our nature, these elements must ever *co-exist*. It would not be more absurd to assert, that an eye, on which blue and yellow rays were continually poured together in one unvaried sensation, could, by the mere exertion of internal powers of thought, discover the nature of the compound beam.

As an illustration of the possibility of this analysis, M. Villers adduces the probable reflections of a camera obscura, which, by the power in him vested, he has endowed with animation*. To the sensorium of this transcendentalist, the light is supposed to pass through a coloured medium; and the subjectivity of the colour, as a part of its sensations, it is affirmed to be capable of discovering, by the exertion of its own unaided powers. To us, indeed, who know that light has been decomposed in passing, it is easy to make the inference, that all the objects in nature are not red; but we cannot suppose the machine itself, however subtile,

* Even though the reasoning from transcendental machinery had been just, there is something so ludicrous in the conception, that an author, who designed it only for illustration, would have been very cautious of repeating it. But, with M. Villers, it is a favourite figure; and he introduces it sometimes in such a manner, that we are uncertain whether it be his wish that we should laugh with him at the follies of metaphysics, or content ourselves with being seriously convinced of the truth of his argument. The following passage is surely more in the manner of Voltaire, than of the grave professor of Königsberg—'If our camera obscura should think of theorizing upon the redness, as belonging to objects out of itself, and existing really, it would, without doubt, find many good reasons for explaining it, by the disposition of the parts of objects, by the refraction of light, and a hundred other fine things, which other cameræ obscuræ of its own stamp would admire, but to which a camera obscura, with a little knowledge of transcendentalism, would listen only with a smile of derision. P. 242.

to be capable of such an inference. It may, indeed, attain that acuteness of scepticism, which denies the existence of external objects; but it cannot separate their believed existence from their redness; since it is only as *definite redness* they can be known by it to exist. It certainly cannot separate the extension from the redness, so as to conceive the redness to belong wholly to itself: and, without this complete analysis, no progress is made in transcendentalism. Still less is it possible, as in another illustration, adduced by M. Villers, that, by the illeptical figure of the image it reflects, a cylindrical mirror should discover its own figure; for, the cylinder, forming no part of the image, more would be necessary than the mere separation of coexisting qualities. The supposed illustrations, however, even when admitted in all their circumstances, shew nothing more than the impossibility of that which they are intended to prove; for if the camera obscura, like the human philosopher, who finds all his sensations invested with space, should conceive the redness with which its sensations are invested to be a mere form of its own sensibility, it would consider, as subjective only, what was in truth a combination of *objective and subjective* elements, and would thus arrange a system of very erroneous philosophy; which, if published in the shape of a 'review of pure reason,' might perplex, and mislead, and set at variance, with endless controversy, all the telescopes, and mirrors, and magic lanthorns, of a whole optical museum.

The faculties of the mind are, by Kant, said to be three, and the division is supposed to be compatible with its fundamental unity. But the mind, he allows, is not an object of *cognition*; it has *noumenal* existence in our consciousness. The categories, therefore, cannot be applied to it; for they are applicable only to *phenomena*. But unity and number are subjective categories; and hence we cannot justly say that there are *three* faculties of *one* mind. We fear that this argument will be considered as a subtlety merely verbal; a charge, which the combatant of verbal subtleties must often expect. But, at the same time that it shews the absurdity of asserting the unreality of number, on principles, which, in the first proposition they include, have assumed it as certain, it marks strongly the dogmatism of that philosophy which considers itelf as the great overthrower of dogmatism. For proof of the unity of the cognitive being, recourse seems to have been had to the *common sense* of the later Scotch philosophers; but to Kant it is not common sense; for, denying the reality of an external world as capable of being known by us, he cannot appeal to universal belief. If his own feeling, therefore, be considered by him as a just ground of certainty, he must believe himself incapable of error; and if he be incapable of error, it is absurd to inquire into the sources of illusion. What that is, which has three faculties, it is indeed impossible to conceive. When we say, that it is extended or *matter*, and when we say that it is unextended or

spirit, we are alike accused of an amphiboly, or a paralogism; which are very fine words, expressive of mistake. It is not to *mind* itself that the categories are applicable; for mind would then be a phenomenon, and not a reality. It is not a *substance*, it is not in *time*, it has no *existence*, nor *possibility* of existence; without *succession*, it exerts three progressively succeeding faculties, and exerts them too, without having in itself any power of *causation*. On the strict principles of transcendentalism, it does not appear to us more reasonable to believe the actual existence of a being, that knows, and judges, and wills, than to acknowledge the infinity of external space. To say, that the one is a form of thought, and the other a reality, is to say nothing; for both feelings are equally strong, and equally unsubstantial.

But we will admit to the transcendentalist his solitary noumenon, and its separate functions. The affections of the mind are awkwardly arranged, as knowledge, judgment, and will. Of the peculiar nature of judgment, indeed, which, in the common acceptation of the term, appears to be included in the second and third offices of the cognitive faculty, M. Villers has left us wholly uncertain: but, from the subjects which he enumerates, as forming a part of his promised review of it, it seems to be nearly synonymous with *taste*, or perhaps to include the more active office of *imagination*. But the division is not merely awkward, as involving in one term affections of little similarity; there are also many affections which it seems impossible to reduce to it. The joy which we feel on a fortunate occurrence, our sorrow on a disagreeable one, our complete despair when every exertion has been vain, may rise indeed from knowledge, but are not themselves knowledge, nor judgment, nor will.

A similar objection may be made to the subdivisions of the cognitive faculty. If the mere addition of one form of thought, as of the absolute in pure reason, authorise a change of term in the function; cognition, instead of three distinct titles, should have as many as its subjective forms.

On considering the theory of sensibility, the first observation that occurs to us, is the singular mixture of opinions which it presents. The truth of space and time is denied by the usual sceptical arguments. No new inquiries of transcendentalism are made; because, with that opinion, inquiry would be useless: yet, as if some new foundation had been given for the belief, the transcendental sceptic asserts the existence of noumena, which though perceived only subjectively, yet influence our sensibility, and entitle it to the name of *external*. The idea of any thing external to ourselves, is confessed to involve space; yet, with the denial of space, the reality of objects external to ourselves is affirmed; and the affirmation is peculiarly frivolous, since *real* objects, not having causation, which is *phenomenal* only, cannot affect our sensibility. It is not enough to say against that solitude of

self which the consistent disciple of Berkeley must adopt, 'that our mind revolts, and is indignant at the very idea,' p. 81; or that 'he professes a belief which is not human, and which, therefore, among human beings, can never be the doctrine of a numerous sect,' p. 82: for the argument is of equal force against transcendentalism, which, if consistent, is precisely the same doctrine with a new name. The professors of both, if they really disbelieve the existence of space, may indeed be assured, that their sect never can be a large one; because to them there is no other being to whom they can make known their creed. The theory of Kant, therefore, appears to us to be nothing more than the common *assertion* of every sceptic, together with that practical *belief* which every sceptic feels, but which, for the credit of his theory, he usually keeps within the silence of his own mind. We are convinced that there is no human being, who does not, by his actions at least, evince his reliance on an external world, and the succession of time; though we are convinced also, that there is no one who can give a reason for the faith that is in him. We therefore do not deny the justness of Kant's conclusion; for its unanswerable force, in mere argument, was felt, long before the philosopher of Königsberg was known. But, the truth of space and of the world being to our reasoning scepticism the same, we cannot deny space, and admit the reality of sensible objects. The theory which combines these may be celebrated as original; but its originality consists only in the combination of opinions, which before were considered as incompatible.

Against Condillac it is urged, that, in ascribing our idea of space to touch, he has already supposed a surface and a hand; but Kant, in ascribing it to *external sensibility*, has already supposed an *object*. His argument for the subjectivity of space, from the permanence of the subject, and the fleeting nature of the object, still more strikingly presupposes space and time; for, if there be no real succession, all things are equally permanent; and unless we have previously known, that of the great multitude of our feelings, a certain number only have proceeded from external objects, during all which the *form* of space was permanent, that very form must be allowed to be fleeting; for all the affections of our mind are not referable to three dimensions. We may remark also, that, on the principles of Kant, our dreams and reveries are, in truth, as little illusive as our waking perceptions, the reference to space being all which constitutes external sensation: and the man who dreams that he has murdered an adversary, has, therefore, murdered a human being, as truly as if in the intercourse of the day he had stabbed his friend. Smell, taste, and hearing, as they do not involve length, breadth, and thickness, should be referred by Kant to *internal*, rather than *external* sensibility. From the observations of those who have been

couched, the same appears certain of vision; and Kant must therefore, with Condillac, whose opinion he attacks, ascribe our knowledge of three dimensions, not objectively indeed, but subjectively to the single organ of touch.

To say that space must be subjective, because we cannot conceive a possible body without length, breadth, and thickness, is but a verbal sophism: for we give the name of *body* only to that which has those dimensions. It might be inferred with equal justice, that there are no objective elements in our preception of the human figure; because, without experience, we believe that every future *man* must have all those parts which are comprehended in a just definition of man. To the transcendentalist, who supposes totality and plurality to be conceptions *posterior* to sensation, there is, besides, a peculiar and insurmountable difficulty, of which he seems not to have been aware, in that *immediate* investiture with space which he affirms to be necessary to sensation. Space having several dimensions, necessarily involves parts; and a body must therefore be considered as a *whole*, previously to all conception of *totality*, or *sensation cannot be invested with space.* This objection appears to us completely decisive against the whole theory of *cognition:* for, if an exertion of *intelligence* be not necessary to *connect* in *one body* the separate dimensions, it is as little necessary in reducing to one great assemblage the boundless phenomena of *nature.*

We do not see for what reason time is considered as *peculiarly* a form of eternal sense; for we invest with succession the changes without, as much as those within, and believe that ages had revolved before ourselves had being, in the same manner as we believe, that there is an infinity of space, to which we have never penetrated.

The explanation of the apodictic certainty of geometry and arithmetic is surely not transcendental. The propositions of these sciences cannot have relation to *the forms of thought of every thinking being*; because man is to himself the only object known *as he is.* Other beings are nouminal to him, and their real forms of thought beyond the possibility of his knowledge. Besides, though the three dimensions of space were known to him as universal, little could be inferred from them alone; and a figure of 1000 sides, the properties of which are equally apodictic as those of a triangle, is certainly an idea as little present to the general mind, as any in physical science. But, though all the possibilities of figure and of numeral combination were universal forms, the feeling of duty, and of God, is allowed to be equally universal; yet it is almost by their controversies alone, that ethics and theology are known to us as sciences. Their universality, therefore, does not render the *relations* of the universals apodictic; nor ought the transcendentalist to ascribe the exactness of mathematical ideas to their

capability of sensible delineation; for their incapability of this is very justly urged by him, as one of the most powerful reasons, for believing that there are ideas not acquired from experience. The two great conceptions on which geometry depends, are, as M. Villers himself has said, an indivisible *point* and *infinity*, which no corporeal organ can originally afford us, and which it is in like manner impossible for us to delineate in any sensible representation; and he triumphantly asks, whether it be possible for the eye to distinguish a polygon of 999 sides from one of 1000, though the different relations of their angles be exactly understood? A sensible delineation would be applicable only to a few cases, and not to every possible case. We have complete certainty, without any diagram, that the shortest line between any two points is a right line; and, without this previous certainty, a thousand trials could not convince us, as there might still be an untried curve, to which our stubborn proposition would be obliged to yield.

Of the table of *forms of intelligence*, little more is necessary to be said than that, like the more ancient arrangement by Aristotle, it is altogether useless. The only valuable arrangement of relations is that, by which objects are combined, in the common order of the sciences; and we receive as much real knowledge, in being told, that we have *spoken prose* all our lives, or that in every proposition, something must be *affirmed* or *denied*, as in being told, that we must always predicate quantity, quality, relation, and modality. Instead of saying, that the intelligence has twelve categories, which existed *a priori*, and independently, it would have been at least equally just, and certainly much more simple, to say, that *in every case of felt relation*, the mental affection which constitutes that feeling, was not a part of the separate perceptions. It did not indeed exist *a priori*, for the perceptions were prior; nor independently of experience, for, without the perceptions, it never would have arisen: but it existed from a law of *the mind itself*, which was so constituted, that, on the perception of certain objects, the *new feeling* of relation should arise. This feeling is to us completely different from either perception, considered separately; and we have always been astonished that the total want of resemblance did not occur with immediate confutation to the authors of those systems of *sensualism*, which endeavour to reduce all our knowledge, *as parts*, to our original external perceptions.

Whatever be the value of the table of *categories*, the *reflective conceptions* appear to us in no respect different. The *conformity* of two sensations is felt, at least as immediately as their *reaction*; and both conceptions equally fix the appropriate place of our sensations in the system of our knowledge.

It is a singular confusion of cause and effect, to say, that the reflective forms are distinguished from the categories, as being applied only to the comparison of our conceptions*, when it is owned that it is from previous reflection the conceptions themselves arise†. If it be only after the observed *conformity* of successive sensations, that we say there are before us *two* objects of a species, the category of number is certainly not the prior feeling. The conformity is more truly a conception, since it is the immediate application of intelligence to the products of sensibility.

If *pure reason* be merely the mode by which our conceptions become to us absolute, it will be difficult to bring under it that regular series of propositions, to which we commonly give the name of *reasoning*. When we say, *all bodies gravitate*; this proposition, which is in truth nothing more than a common instance of generalization, may be allowed to be a product of reason. But when we add, *the air is a body; the air must have weight*: these propositions are acts of intelligence, and have nothing absolute in them, more than any common application of the categories Nor is totality always necessary even to one of the propositions; for we have reasonings of probability, which depend on discordant results of the past. Thus, when we say, *from the appearance of the sky, it will probably rain soon*, we do not assert any thing absolute: yet we reason; for reasoning does not require *universals*, but *generals*. To the exercise of pure reason there is no tendency peculiarly irresistible. The idea of infinity rises in our mind by a law of our nature, but by a law not more powerful than that by which, in certain circumstances, we acquire the sensations of sight or touch.

Of *ideals* as opposed to *ideas*, we do not understand the difference; for nothing is gained by adding our own *oneness* to absolute *unity* or *totality*, which, in the very conception, are *one*: and it certainly is not meant, that we apply to those ideas any other circumstance of our consciousness, than the *fundamental unity*; for the *ideal* of the universe is not invested with our knowledge or passions. The difference of the ideal of the human soul, and of that *unity of consciousness* which must be felt, previously to the existence of the ideal, is too nice for our discernment.

The amphibolies, paralogisms, &c. of which Kant speaks, are impossible, as they suppose a standard which is not in our possession; a corrector of reference, where reference cannot err; a mode

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* Elles ne s'emploient qu'à comparer entre elles les conceptions des objets. P. 299.

† C'est aussi par la réflexion transcendentale que l'entendement examine et décide auxquelles de nos catégories il convient de rapporter des objets donnés à la sensibilité. P. 298.

of knowing objects different from that of the constituting forms of our cognition. Till the transcendentalist give us a new mode of discernment, we must believe *whatever* is invested with space and time to be, *by that very investiture*, a *sensation; whatever* is invested with the catagories, to be a *conception;* and *whatever* is absolute, to be an *idea;* so that the error of our application, if in truth there be an error, must, to us, be for ever unknown.

Even on the supposition of amphibolies, as capable of being discovered, the peculiar instances are not well explained. If external sensation give us the knowledge only of that which is extended, the mere consideration of it, as absolute, may afford the idea of infinite extension, but not of an indivisible monade. Nor does materialism, in the atheistic sense of the term, arise from the addition of absolute causation to external sensibility: for causation means only the power of producing a change, and has no other reference to the causing substance; which may have existed from eternity, or begun to exist, without a cause, or by divine volition, at the very moment in which its energy was exerted. Between *simple causation*, a category *justly* applicable to external sense, and *absolute causation*, there is in truth no difference; for both mean only the power of producing a change: and if it be not *cause*, but *effect*, which is considered as absolute, the application of this would rather lead to spiritual theism. That *spirit* is the general representation of that internal sensibility, of which the form is time, is a proposition more of mysticism than of philosophy. Absolute time is eternity; which, if it be an archetype of any thing, has no nearer resemblance to spirit, as commonly understood, than to *matter;* and if all that is necessary be the want of dimension, the sensations of sound or smell, being as little extended as love or hate, or any other internal feeling, might, with equal reason, be considered as the object of the supposed amphiboly of the human soul.

The perplexities which arise from the consideration of matter, either as infinitely divisible, or ultimately indivisible, receive no solution from all that M. Villers has stated. Our error, he says, consists in confounding *matter*, as a mere object in space presented by our sensibility, with *matter* as presented by our intelligence in all the aggregate of conceived relations*. 'As an object of sensation, matter must always be reducible to an atom, or first element, which itself also must be in space, and therefore extended; because nothing imperceptible can belong to our sensibility. But, when considered as an object of intelligence, there

* We think it necessary to add the whole passage from the original, as we may have been led into a misapprehension of its meaning, by the attention which M. Villers has paid to an excellent rule of rhetoric: a subject in itself most obscure, he has certainly succeeded in treating with all appropriate obscurity. 'La question

must always appear a possible reduction or division from the state of matter into that of unextended thought, *since it is already as a thought we consider it;* and as there is no apparent transition from the one state to the other, we connect them by *interposed infinity*, as in the system of monades.' In both cases the *matter* of sensibility is said to be confounded with the *matter* of intelligence, and to be combined with the transcendental ideas of *absolute simplicity* and *reality*. The attempt to explain a difficulty with such increase of difficulty, is like the kindness which would free us from the doubtfulness of twilight, by casting us into utter darkness. In both the cases adduced, we see much confusion of another kind; but we do not see that confusion of the representations of separate faculties, which M. Villers condemns. *In both*, the perception of matter, as an object in space, is derived from sensibility; but, *in both*, matter is considered *categorically:* for we cannot think of division, without the conceptions of plurality, possibility, &c. The *atomist*, therefore, does not err, by confounding the representations of separate powers of cognition, but by using, in reference to products of the same power, terms which are contradictory; for that which is in space, having still dimension, must still be potentially divisible; nor does its infinite divisibility arise, in any manner, from the necessity of combining it with thought, by the medium of infinity. If that were the only reason of inferring it, the difficulties which are its consequence, might be very easily obviated by the simple denial of the antecedent; for there is in truth no transition in such inquiries from matter to thought, but from matter as existing combined, to matter as existing separately; or, if we be denied the knowledge of any thing but our own affections, from one thought to another. If there were indeed a necessary transition from matter to thought, the interposed infinity, having nothing common with either, could not connect them, more

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agitée si long tems, et abandonnée en suite par désespoir, de la divisibilité ou non-divisibilité de la matière à l'infini, ne tirait toute sa difficulté que d'une double amphibolie de cette sorte; les uns voulaient appliquer tout le jeu de l'entendement à la matière comme objet de notre sensibilité; les autres prenaient pour un objet de notre sensibilité la conception de matière; ils confondaient en attribuant l'intuition à l'entendement, et la conception à la sensibilité. Celui qui opère sur le matière en tant qu'objet *senti* et *perçu*, doit toujours, en résultat, trouver un premier, élément qui soit quelque chose d'étendu et de perceptible, qui occupe un lieu dans l'espace, car on ne peut supposer à la sensibilité aucun objet imperceptible; d'où le système des atômes matériels, et la *philosophie corpusculaire* d'*Epicure*. Celui, au contraire, qui opère sur la matière en tant qu'objet *pense* et *conçu*, doit apercevoir une division toujours possible de l'état de matière jusqu'à l'état de *pensée*, puisque c'est sur une pensée qu'il opère: or comme entre ces deux états, l'esprit ne voit pas de mode de transition, il y met l'infini; d'où le système des monades. Le tort de l'un et de l'autre, c'est de confondre la matière en tant que représentation de la *sensibilité*, avec la matière en tant que représentation de l'*entendement*. Il y a aussi deux *idées* transcendentales, celle du *simple absolu*, et celle du *réel absolu* qui jouent ici un rôle.' P. 297.

than the sensations of light and fragrance could be connected by a sound. There is therefore no aid to the perplexed metaphysician in the principles of transcendentalism, which, if adopted, only establish with greater force that infinity of parts which he is unable to comprehend: for the conception of an object *as a whole* in space, is a just application of a category which necessarily involves divisibility; and every object of sensibility, being confessedly reducible to elements which are still extended, 'since we cannot suppose sensibility to have any object which is not perceptible,' must, at every stage, be justly conceivable as a whole in space: and we are therefore entitled, without an error of philosophy, to assert, that matter is infinitely divisible. There is, indeed, one sense, in which the result of the reasoning of M. Villers may be understood and which, in spite of the laboured antithesis of the opposite opinions, we believe to have been that which suggested confusedly his transcendental explanation. It may be said, that, in asserting the infinite divisibility of matter, we take for granted matter as an object known to us, while it is of our own feelings only we have real knowledge; and a feeling, being *one*, is not infinitely divisible. Had this been stated, we should have had less scruple in giving our *verbal* assent; because the argument is, in truth, unanswerable: but it is unanswerable, precisely as the arguments of Berkeley and Hume against an external world. However impossible it be for us to disbelieve it, we certainly are not justified by any process of ratiocination, in assuming the existence of objects without; but having assumed their existence, it is equally impossible for us to conceive their parts as without dimension, at any stage of potential division. The complete denial of external things is the only shelter to which we can safely have recourse. If that alternative, impossible to our *feelings*, be not adopted, we must submit to the acknowledgement of the infinite divisibility of matter, in all its perplexities of language and of thought.

To the validity of *practical reason*, it is necessary that we admit the objective certainty of *self*, and of all those modifications of self of which we are conscious. That objections may be made to this appeal, M. Villers is fully sensible.—'Perhaps this immediate consciousness, this internal perception of *man*, is but a new product of that speculative reason which has already deceived me; an *ideal* forged by itself; an illusion; a phantom! It seems to me, indeed, that it exists independently of all speculation; that it is the great and *living* being within me. But this very belief may be a mistake. From whom shall I receive a pledge of its reality, a proof that it is something more than a simple conception of fancy?' p. 367. After all this rigour of scepticism, he proceeds to give the desired proof with that com-

plete pomp of demonstration, which is implied in the French *voici*,* for which the more modest English has no corresponding idiom. 'The destiny of my being is not simple knowledge. I am formed also, as its higher development, to will and to act: I must influence, and be influenced by every thing which surrounds me. Hence proceeds an order of realities, which have in me their source and principle. My actions, and the volitions which determine any actions, not given me from without, but created and modified by myself alone, have therefore an existence, to me more truly real than that of external things. They arise from the centre of my being, in the fundamental reality of my own internal consciousness; while external things, arriving at that centre only after the modifying influence of the medium through which they passed, have but a secondary reality, of which I may justly doubt. My actions are determined by my will; and my will is the immediate result of that consciousness in which I exist independently of things. My actions, and their directing volitions, are therefore a proof, that the feeling of *self* is not an illusion. Their reality is the desired pledge of its reality. I will: and by the sublime truths which my volition affords me, I am raised to the rank of a being who lives in all the plenitude of life.' To this parade of language, of which, in abridging the verbal amplitude, we have retained all the reasoning, we must do the justice of saying, that we have seldom seen an objection more magnificently evaded. The position, which was intended to be proved, has indeed been assumed in every sentence; but it has been assumed with such just regard to the principles of harmonics, that, after more than two pages of majesty and melody, we feel something like the remorse of ingratitude, in reverting to the original question. The question was, whether the feeling of self, in all its modifications, be not an illusion like that of the phenomenal world? and we are told, that because man is destined to act, and his action is the immediate result of his will, and of his will he is conscious; there are therefore self, and will, and action. Had M. Villers merely said, that because we are conscious of self, self exists; though we should perhaps have denied the agreement of the position with his general scepticism, we should at least have acknowledged its force as felt by ourselves. But when he contends, that the mere combination of a series of feelings, which all equally depend on the truth of the question itself, as being all equally real, or equally phenomenal, is a proof of the reality of the feelings combined, we are less disposed to be merciful to inconsistency; and must require, from him who considers consciousness as a thing to be proved, some mode of reconciling the belief of the

* Voici la response à ces doutes: voici la garantie demandée.

reality of a combination of feelings with the previous ignorance of their reality, as separate. It is not because man is an active being, that he has objective certainty of himself; for the same certainty is equally felt in the most passive of our sensations; and, in truth, we know that *we act*, only because we have taken for granted that, which is considered as proved by action. Our *will* before the experience of action, is to our consciousness a passive feeling; and our knowledge of the *action* is transcendentally less certain, because it can be acquired only from the phenomenal world of space and time, in which the changes produced by our action take place. Even though the explanation were in all its other circumstances just, how many forms of intelligence and sensibility does it consider as realities! The destiny of man, the development of his being, the system of things created by himself, the succession of his will and action, have no meaning, unless we admit time, and causation, and number, and the categories of modality; so that the highest of all realities, the elevating sublimities of our being, are only the illusions of unsubstantial forms, which are at once the cause and the effect of every certainty we feel.

The doctrines of practical reason are four; the liberty of will, the obligation to virtue, our existence in a future state, and our responsibility to a supreme Creator and Judge. On all these subjects, the transcendentalist has more than usual inconsistency. He declares that they are not objects to be *known* or* *proved*, in the strict sense of the terms. He rejoices that he knows nothing of them. 'He would even fear to know any thing of his duties, of God, and of his soul; convinced, that if they were objects of his knowledge, they must be in themselves illusions, phenomena purely human of his mode of seeing and conceiving.' P. 360. Nothing, therefore, is more evident, than that the forms of cognition are not justly applicable to objects which belong not to cognition. Such an application would be an amphiboly, or a paralogism, or an error of perhaps still longer name: yet there is not an idea of practical reason in which the forms of our *knowledge* are not involved.

Freedom of will implies *number*, because there is choice; it implies *existence*, and *possibility*, and *causation*, because there is power; it implies *time*, because there is the succession of will and action: *It*

* How unfortunate is it for a person, who looks forward with such fear to the knowledge of his duties, that he should afterwards be obliged (though, we make no doubt, with great reluctance, to confess,) that they are now irresistibly established by the most rigid *proofs*;—avec une rigueur de *méthode*, et de *preuves* qui ni laissent nul recours raisonnable à l'opiniâtreté qui ne veut pas être convaincu. P. 388.

*is therefore an error to say that the will is free**. But though the application of the categories were allowable, the feeling supposed does not justify the assertion. Consciousness informs us only of the present, or, if memory too may be included, of that which is really past. It does not inform us of that *which might have been the past*. Thus it tells us that we did will a particular action, or that we do will a particular action, or, from that law by which we infer the future from the past, that if we shall will a particular action, the action will ensue. But it is conjecture, and not consciousness, which tells us, that the circumstances of the past having been the same, we might have chosen a different action. It is not enough, therefore, for Kant to say, that we have freedom of will, because we are conscious of the power of willing; for the most rigid necessarian does not deny that power. He contends for it even more earnestly than the defender of what has been called its freedom: for action, as far as it is not governed by the motive decisions of reason, resembles more the convulsions of the morbid body, than the graceful and spontaneous movements of the healthy limb.

Of moral duty it may be said, in like manner, that *transcendentally* it cannot exist. The voice of conscience, commanding to certain actions, implies succession, causation, existence, and other forms which are applicable only by an error of philosophising. We have, in certain cases, the feeling of duty; but we have also, in certain cases, the feeling of external independent space. Of this latter, it is at *least equally* difficult to divest ourselves; and we are convinced that in the mind of others, if of others we may be allowed to speak objectively, the feeling of duty can as readily be laid aside as that of external things. The liveliness of conviction, the universality, every circumstance is the same. But there is no really existing space: it is therefore probable, that the voice of conscience is in like manner an illusion. Such appears to us the reasoning of the rigid transcendentalist. But the disciple of Kant, less consistent, admits and rejects with equal readiness where the evidence of both is the same. Nor is the confessed illusion merely of equal strength of evidence: the belief of it seems absolutely necessary to the existence of duty. What room is there for the exertion of virtue, where other beings cannot be known to us as objects? We surely cannot increase

* This species of strict confutation, *ex concessis*, will not appear unmerciful to those who have observed the lavish use which the transcendentalists themselves have made of arguments of a similar kind. The only difference is, that we argue from the principles of him whom we oppose; and that they conceive they have triumphed, when they have merely shewn the inconsistency of their own opinions with those of any other theorist.

the happiness of him of whose desires we are ignorant, nor relieve a misery which exists but in our own forms of thought.

In the maxims which are given to us as a summary of virtue, we observe no peculiar merit; and on the transcendental theory of morality, which supposes it to be a voice within us, independent of experience in its origin, and incapable of being aided by any maxims, or stilled by any of the seductions of life, the parade of precept seems to have very little meaning. It is not more absurd to command a human being to invest his external sensations with space, than to command him to listen to sounds which are ever speaking to his heart, and from which it is impossible for him, in any situation, to withhold his attention. If any new duty could be taught by it, a maxim might be of value. But duty can receive no addition, since it is wholly independent of experience. It cannot be taught: for we teach only that which can be *known*; and duty is merely *felt*.

If, however, maxims be of importance, the negative part of the first should certainly have been omitted: for, though it be perhaps better, upon the whole, that we should consider every thinking being as an end in himself, so far as *not to injure him* for the good of another, there are innumerable situations in common life, in which an individual may be employed, without injury, but at the same time without reference to himself, for the good of a third person. Even where himself is the great object, it is surely no want of virtue to consider him also as a mean, in the good which our action, with respect to him, may produce to others. The beautiful progression of good, by which a virtuous action is diffused in its effects over a multitude of unknown beings, is at once a delightful contemplation and a powerful excitement to the benevolent mind. Had the first liberators of an injured country, if we may be allowed to take a melancholy example from the recent events of our own time, foreseen a period of future invasion of its rights, and trusted, in rousing their little band, that their example might, after many ages, inspirit their descendants to a similar resistance of oppression; we surely cannot think that their zeal would have been less ardent, or that, as an object of our interest, it would excite feelings of less virtuous sublimity.

The second maxim, when stripped of the mysterious majesty of its terms, is only the common doctrine of *utility*; but with an expression so very complicated and artificial, that it loses all the effect of a proverb, for which alone such maxims are valuable. *An universal law of nature* is not an object apprehensible by the multitude. It might have been more simple, and therefore better stated—*Do that which it would be of advantage upon the whole, that every one should in a similar situation imitate.* Even this, however, is without that quick-felt application to self, which is of

such power in the proverbial Christian maxim, and which much more than compensates the cases to which that maxim is inapplicable.

The belief of the reality of a future state, forms a very inconsistent part of a theory which denies the actual succession of time; nor, omitting this fundamental objection, do we understand the poetry with which the state of future being is described. The mind cannot quit the phenomenal world, unless it cease to exist with all its necessary and independent forms. Though *around* it (for we have yet no noumenal language) be a system of *things in themselves*, there is a subject, as well as objects; and this subject cannot fail to modify the external influences. Our knowledge of external things must be combined, as at present of objective and subjective elements; and the world may change its laws, but in all its changes it must to us be *phenomenal*.

In reviewing the Transcendental theism, we own, that it is very difficult for us to restrain that feeling of the *ludicrous*, which, on a system so respectable, in its celebrity at least, we are unwilling to indulge. An absolute unity, which is neither one nor more than one, a creator of all things without causation or priority a judge of the past without succession of time, a being who does not* exist, are so utterly inconceivable by us, that, if theism depend on the conception of them, we must overcome the strongest reluctance of our nature, and be atheists when the most delightful of our feelings has ceased to be possible.

The animadversions we have made on the Transcendental theory, have, we trust, justified our assertion, that its originality consists merely in intermingling, as parts of one system, without regard to its general harmony, the practical belief which the sceptic has always felt, with the tenets which he speculatively avows. The critical philosophy has not connected these discordant opinions; it has merely placed them together; and when thus exhibited, we do not feel more strongly the possibility of their coalescence. It is acknowledged by M. Villers, that Kant is thoroughly acquainted with the metaphysical writings of every country in Europe; and we think we trace in him a peculiar acquaintance with those of our own language. The *egoism* of Berkeley and Hume is largely incorporated in his system, and combined with the opposing tenets of the school of Dr Reid If, to the *common sense* of that school, we add the *innate susceptibilities* of Leibnitz, and the denial by Hume of *necessary connexion in causation, and of the reality of external perception*, we bring before us the *theory of cognition* of Kant But the force of com-

* M. Villers adds, in a note, as if astonished at the fact, that it was for denying the existence of God, that Fichte was declared an atheist by the theologians of Dresden. P. 341.

mon sense, and of the distinction of innate ideas, is invalidated by the denial of the reality of our external knowledge; and the denial of the reality of our perception of objects in space, is invalidated by the adoption of the principle of common sense.

It remains to us only to say a few words on that part of the merit which belongs to the exposition of the theory. To its frequency of digressive declamation, we have before alluded: and we can assure our readers, that, whatever terrors may be associated in their mind with the formidable name of Kant, they have little to fear in the summary which his disciple has given them. Instead of being dry and repulsive, it has the contrary fault of too lavish ornament. There is occasionally a richness of metaphor, which would have delighted us in a work of less rigid science; and which, when we consider the genius of the people to whom it was addressed, was perhaps, even in an abstruse investigation, an artifice of prudent skill. Had our limits permitted us, we could have selected many passages of great oratorical interest. We could also have selected many, which, in attempting unusual strength of imagery or expression, have bordered very closely on badness of taste. But in reviewing the exposition of a system, of which, in the different senses of the terms, we have at once heard so much and so little, we thought it of more consequence to examine the merit of the theorist, than of the commentator. At the same time, we readily confess, that the qualities he has himself exhibited in this humbler office, have a just claim to our regard. We are sensible of the zeal and the eloquence, with which he delivers a series of doctrines, that to him appear of no common value; and we applaud the sentiment with which, as a citizen retained unwillingly from the nation which gave him birth, he offers to it the acquisitions of years of absence. 'Prevented,' he says, 'by circumstances, from the glory of attaching my name to those great events, which have produced so memorable a reform in the political situation of my country, it shall be found there, at least among the names of those who, in the calmer labour of intellectual reform have been assiduous to hasten the development of a purer morality, and a stricter science.' P. lxvii. The enthusiasm with which the effects of the principles of transcendentalism are, on every occasion, exhibited, though it may not have excited our sympathy of admiration, has convinced us at least of the reality of their expounder's esteem; and if our opinion of their value were equal to his own, we should see little occasion for regret in those circumstances, which, withholding the doubtful distinction of attaching his name to the fleeting tumults of the day, enabled him to acquire, and communicate to a great nation, a system of the most important knowledge, and thus to perpetuate his name with the eternal interests of moral and scientific truth.

ART. II. *Travels in Greece and Turkey, undertaken by order of Louis XVI. and with the authority of the Ottoman Court.* By C. S. Sonnini, Member of several Scientific and Literary Societies, of the Societies of Agriculture at Paris, and of the Observers of Men. Illustrated by Engravings, and a Map of those Countries. Translated from the French. 4to. 540 pp. 1801.

'THESE Franks must be great blockheads,' said a Turk, speaking to his companion of M. Sonnini, 'since this one, who, among them is reckoned intelligent, knows nothing of what may be useful to him.' It is our opinion, however, that the belief of this true believer was an erroneous belief; and that our author's discernment both of the *utile* and the *dulce*, is much more extensive than he imagined. For instance, he has discovered to a certainty, that the possession of the Grecian isles would be extremely useful to France; moreover, he has discovered that those isles are admirably adapted by nature to flourish under a consular government: and we, not to be left behind in the perception of utility, have discovered that the government of Crete or Cyprus would be both useful and agreeable to M. Sonnini.

The cowardice, ignorance, and dishonesty of the modern Greeks continued long to be the theme of travellers, and particularly of the French. But it is now discovered, that under these qualities, are concealed the germs of every thing great and heroic; that the valour of ancient Sparta, the elegance of Athens, and the refinement of all Greece, wait only to be relieved from the barbarous oppressions of the Turks, to burst forth in all their original splendour.

The French writers were not always so tremblingly alive to the wrongs and misfortunes of the Greeks. Whilst Turkey was an ally of France, the Turks were a brave, an honest, and a generous nation; though it was to be desired they could abate something of their intolerance, together with a certain haughtiness of deportment, by no means characteristic of the best company. But the inconceivable dulness of the Sublime Porte, in not perceiving how infinitely the possession of Egypt by France must have redounded to its advantage, has bereft its subjects of all their virtues, and magnified their iniquities to a degree no longer supportable.

The Ottoman government is vicious in its principles, and still more defective in its administration: we by no means propose to undertake its defence; and if ever we publish plans for a perfect government (which are wonderfully salutary when confined to paper), the members of the Divan are the last politicians we should think of consulting. But the candid and impartial, before

they attribute the whole of the change in the situation of Greece to the Turkish government, would do well to recollect, that, under the Roman dominion, the Greeks had entirely lost their martial spirit, and degenerated to a nation of dastardly sycophants; and that their commerce and industry had undergone a remarkable declension, under the eastern empire. The thirty years drought, which lately desolated the plains of Cyprus, was probably not owing altogether to Turkish oppression; and it is natural to imagine, that those islands (such as Scio), where the Mohamedans do not interfere in the internal arrangements, furnish a tolerable exact measure of the prosperity that would have been enjoyed by Greece in general, had it never been subjected to its present rulers.

The work before us may properly be considered as a sequel to our author's interesting travels in Egypt. On the 17th of October 1778, he set out from Alexandria, and, somewhat prematurely, exhibits a striking portrait of the people and country he had just left, contrasted with those he was about to see.

'A space rather short separates the two countries on which Antiquity prides herself; and after having visited that which passes for the cradle of the arts and sciences, and from which the Greeks derived a part of their knowledge, I resolved to see also the country which may be called the cradle of the graces and of good taste. There, a burning climate does not, as in Egypt, dry up a soil which ceases to produce, as soon as active industry ceases to cultivate it, and cover it with an abundant moisture. There, we see not those vast, sandy and arid plains, those naked and heated rocks, forsaken by nature, and which man does not traverse without considerable difficulty and danger. That frightful nakedness by which habitable Egypt will ever be circumscribed and confined, disfigures not the land of Greece. There, the temperature is mild, the mountains are covered by forests, the atmosphere is cooled by rains, the vallies are watered by numerous streams, and the soil may be adapted to several kinds of culture.

'If, from the comparison of the physical state of the two countries, we pass to that of the men who inhabit them, we shall find no resemblance but in the despotism by which they were both enslaved. The Copt or the native of Egypt, whose character partakes of the dryness and rudeness of the climate, is short and heavy: his head is big, but empty; his face is broad and flat; his complexion is sallow and dark; and his countenance is mean. His disposition is gloomy and melancholy: his treachery is the more dangerous, as it is in a manner more concentred; having no taste for the arts, no flight of curiosity leads him to instruction; sedentary, because he has no vivacity in his mind, he seeks not to be acquainted with what surrounds him; lazy and slovenly, clownish and ignorant, unfeeling and superstitious, he has no longer any remembrance, nor even any trace remaining, of the greatness of his ancestors.

'What a difference between this nation entirely degenerated, and

that which still inhabits the beautiful countries of Greece? Under a pure sky, in a wholesome, temperate atmosphere, impregnated with the sweetest emanations, on a soil which nature decks with flowers, and clothes with the verdure of an eternal spring, or which may be enriched with crops of every sort, or with delicious fruits, we must expect, among the men, to meet only with amenity of manners, and sweetness of disposition. I am speaking of the men whose generations there succeed each other without interruption; for the ignorant and untractable usurper may, by his stupid ferocity, pollute the most happy climate, the most smiling country; and ages are required for their influence to temper, in a perceptible manner, the rudeness of his inclinations.

'The man of these charming parts of Greece is of a handsome stature; he carries his head high, his body erect, or rather inclined backward than forward; he is dignified in his carriage, easy in his manners, and nimble in his gait; his eyes are full of vivacity; his contenance is open, and his address agreeable and prepossessing; he is neat and elegant in his clothing; he has a taste for dress, as for every thing that is beautiful; active, industrious, and even enterprising, he is capable of executing great things; he speaks with ease, he expresses himself with warmth; he is acquainted with the language of the passions, and he likewise astonishes by his natural eloquence; he loves the arts, without daring to cultivate them, under the brazen yoke which hangs heavy on his neck; skilful and cunning in trade, he does not always conduct himself in it with that frankness which constitutes its principal basis; and if we still find in modern Greece many of the fine qualities which do honour to the history of ancient Greece, it cannot be denied that Superstition, the child of Ignorance and Slavery, greatly tarnishes their lustre; and we also discover in their disposition that fickleness, that pliability, that want of sincerity, in short, that artful turn of mind which borders on treachery, and of which the Greeks of antiquity have been accused.

This passage will afford our readers a general idea of the impressive style successfully adopted by M. Sonnini throughout this work. We will trace him at different stations of his route, which it may be useful previously to describe. From Egypt, our author proceeds to Cyprus and Rhodes, and, by a circuit among the Asiatic isles, brings us to Santorin and Crete. This celebrated country deservedly occupies a large portion of his book; but the small and indigent isle of Argentiera receives an attention proportioned to the length of his residence, rather than its own importance. Nascia, which he recommends for the depôt of French commerce, Samos and Scio bring us opposite to Chesma, on the continent, whence M. Sonnini journed by land to Smyrna, then laid waste by the plague. In the voyage from thence to Salonica, Lesbos, Lemnos, and Mount Athos occur. From Salonica, our author made an excursion to Mount Olympus

and the work concludes by his arrival at Napoli di Romania, the most flourishing sea port of the Morea.

Cyprus, sacred to Venus, retains few vestiges of its ancient magnificence. The mines of gold which are said to have been wrought, and those of copper which certainly were, and whence the island derived its name, are lost, through the discouragements given by the Turks to all useful labours. Emeralds and amethysts are still found amongst its mountains; and asbestos continues to be dug from its quarry near Cape Cromachiti. Immense salterns, and reservoirs for oil of olives, attest the industry which formerly enriched the Cypriots, and mock the scanty stores of their descendants. Here the cotton plant attains a perfection nature has denied it in the islands of the north; but its excellence has declined; and the manufacture of Sugar, introduced by the Venetians, has not survived the expulsion of that nation. Flights of grasshoppers (sent, no doubt, by the Turks) invade the island from the east, and vegetation disappears before their destructive myriads. Long and cruel droughts frequently banish every appearance of verdure. These, according to our author, are becoming more frequent, and are to be attributed to the extirpation of the forests, which attracted moisture. The same cause will, he thinks, produce a similar effect in his native county; and if timely precautions be not employed to prevent it, France may participate 'in the aridity with which a detestable government has struck the soil of Cyprus.' From this passage, we may learn to appreciate the candour of M. Sonnini with regard to the Turkish government, since it is so severely reprobated for cutting down the forests, and thereby occasioning drought. That trees have some effect in promoting rain, is a plausible hypothesis: but what government ever thought of limiting the extent of its plantations by the criterion of a water guage? Does not our government quietly behold new plantations rising everywhere around us, though the recent scarcities be chiefly imputable to excess of humidity?

Rhodes, celebrated for the valour of its inhabitants, their activity and skill in navigation, has retained only the city of the same name, of the three which it formerly contained. It is inhabited chiefly by Turks, whose orchards and gardens embellish the environs. The Rhodians are still expert navigators; but the produce of their land bears no proportion to the riches which an intelligent culture might extract from a soil so prolific.

We will here insert the only two geological speculations, in which our author has indulged; only remarking, that neither of them is new.

'When we direct our view over that immense number of broad elevated lawns, of summits of mountains, of points of rocks, placed without order, and very near to each other, with which the Mediterranean is covered on the east, we cannot avoid thinking that this extent of sea, thickly strewn with a multitude of lands, has formed a continent in times the most remote; and that a sudden eruption of the waters of the Black sea, earthquakes, and the violent action of volcanoes, have inundated that ancient country of Greece, and torn it into innumerable shreds. Vast and deep chasms have swallowed up a considerable portion of that country; and there has remained of it only peaks of mountains, furrowed by cavities and fissures, in which the confusion of the substances attests that they have been overthrown.

'Each of these islands, the remains of an ancient land, violently shaken, and for the most part ingulfed by one of those great catastrophies of Nature, the traces of which are so strongly imprinted on the surface of the globe, has near its islets, rocks emerging from the waters, or concealed beneath them, ledges, shoals, fragments of its ancient junction with a neighbouring island, or with a continent: it is still easy for the observer to follow some of the lines which connected these lands with each other, and to convince himself that they all formed but one uninterrupted country. Who knows even whether it be not in this part of the Mediterranean, rather than in the ocean, that we must look for the site of the famous Atlantis of Plato? That celebrated philosopher of antiquity has said, in express terms, that it was to the south of Attica, which justifies the well-founded presumption, that it was situated towards the coast of Libya.' p. 131–132.

'But what has hitherto escaped remark, but which, nevertheless, is an important observation, is, that all the other islands of the same sea lie, with respect to their length, in a north and south direction, with more or less inclination towards the east or west; whereas the island of Candia extends from east to west: it appears to be a long base, on which the whole Archipelago reposes. This peculiar direction indicates a different origin. The islands of the Ægean sea are the summits of mountains, which belong to a country whose plains have been submerged by a sudden irruption of the waters of the black sea. The effects of this vast submersion are discoverable in the form of the masses which it has suffered to subsist, and which have all preserved a direction parallel to the current that has insulated them, and whose impetuosity has been broken against the island of Candia, on which it has been unable to make any impression. May it not be supposed that these very waters, of a rapidity so violent, and a part of which was directed towards the south-east, repelled to the lands of Syria, may have exercised their action in a direction contrary to their first impulse, and have detached from Africa the island of Candia, by inundating the low lands by which they were united? And this conjecture of the ancient junction of Candia with the coast of Barbary, acquires an additional degree of probability, when we pay attention

to the shallowness of the channel which separates them, and whose bottom every where affords soundings. p. 210–211.

Our limits were inadequate to offer, even an indistinct sketch of the various places described by our author, whom we will now take up at the conclusion of his labours.

'The aspect of Salonica, from the harbour, announces an agreeable enclosure; but when you enter it, you presently relinquish the good opinion which you had conceived of it; streets, narrow and ill paved, as well as crooked; houses, slovenly on the outside, and, in the inside, worse laid out, together with a miserable population, induce the wish of seeing it only at a distance. It is, nevertheless, one of the finest towns of Turkey, and one of the most important, from its position, and the richness of its trade. It is also the seat of one of the first governments of the empire.' p. 512.

M Sonnini found the Macedonians, now Albanians, in a state of open revolt against the Porte, and the whole country exposed to the depredations of banditti. Infinite address was requisite to disengage our traveller from a variety of dangerous rencounters. Need we say that M. Sonnini possessed the requisite address? The character of a physician was the only one in which it would have been practicable to travel in Macedonia: and, what might formerly have been a passport to Parnassus, now only conducted our author to the summits of Olympus. The solitary convent of St. Dennis terminates the habitable region of the mountain: beyond that are found heaps of snow in the middle of July. He continued to ascend, whilst a few stunted trees and shrubs favoured his exertions; but at last these forsook him, and he was obliged to contemplate from that station, the rocky and inaccessible summit covered with eternal snows.

'The reader may easily conceive the immense extent of different countries which our view embraced from the top of Olympus. It seemed to us to touch Pelion and Ossa, which form another chain of mountains; and the vale of Tempe, of which the ancient poets have spoken to us as a place of delight, appeared to us a very narrow gorge; and the river Peneus which waters it, a streamlet of water scarcely perceptible. However, we there remarked every thing that takes place on very lofty eminences; a very sharp cold, waters still colder, enormous shelves of rocks, heaped the one on the other, and alike threatening heaven with their point, and earth with their fall, and at our feet big clouds, which, by separating us from the abode of men, seemed to place us in the habitation of the gods.' p. 532.

Much of the ground over which our author conducts his readers in this volume, we have lately traversed with M. Olivier, a writer of a very different description, in whose artless pages we discover many valuable details, and much specific information,

omitted by M. Sonnini. Both of these travellers spoke Greek, and neither understood Turkish; a circumstance which, even without the help of prepossesion, must have influenced the results of their observations in a variety of particulars. Both avoid the description of antique remains, and both attempt to delineate manners, without having recourse to anecdote. A few exceptions to this last remark occur in the work before us; but we recollect none in which the author did not discover a courage, a dexterity, or presence of mind, never sufficiently to be extolled. Such anecdotes, however, are not always the best for illustrating the Grecian manners. They are both naturalists; and, in this department, much pleasing information is afforded by each: in other respects, there is little similarity. The rhetorical tone of M. Sonnini would disdain a comparison with the simplicity of diction observed in his countryman: whilst the candour and persevering research of M. Olivier, stamps a value on his performance, which his rival is usually very far from reaching. As travellers, they bear the same relation to each other, that Arrian and Curtius do as historians of Alexander.

ART. III. *Natural Theology: or, Evidences of the Existence and Attributes of the Deity*, collected from the appearances of nature. By William Paley, D D. Archdeacon of Carlisle. London. 1802. 8vo. pp. 586.

THE name of Dr. Paley, though scarcely to be reckoned among those of the *great* theologians and philosophers of England, is probably associated with as large and as enviable a portion of public approbation, as that of any living ecclesiastic. With less learning and less originality than some of his distinguished predecessors, it would be difficult, perhaps, to point out his superior in soundness of judgment, or in vigilant and comprehensive sagacity. With great strength of reasoning and power of decision, he has also united more moderation and liberality of sentiment, than is usually to be found among disputants; and added weight to his arguments by a certain plainness and sobriety of manner, that is infinitely better calculated to produce conviction than the sallies of an ambitious eloquence.

His great merit lies in the clear perception of the strong or the difficult parts of a question, and in the judicious selection and perspicuous arrangement of his arguments: invention is less within his province; and even when his conclusions appear to partake of originality, it will commonly be found that they have been suggested by a minute and scrupulous examination of pro-

positions that had been furnished by others. His common way is, to break down a subject into as many distinct parts as it really appears to contain, and to make each of them the subject of a separate and rigorous investigation. In consequence of this, his arguments frequently appear to be narrow and circumscribed in their application; and the reader is sometimes apt to wish for the excursive speculation and ample range of a less accurate reasoner. The truth is, however, that upon many subjects, it is impossible to attain precision, without this formality and detail. Sophistry always delights in generalities; and fallacy is never so safe from detection, as when inquiry is eluded by rapidity of progression, and the mind hurried from one half view of a subject to another, without ever being permitted to reflect upon what has been presented to it.

Almost all the writings of Dr. Paley relate to the highest and most important questions upon which human reason can be exercised, and appear to have been composed with suitable caution and deliberation. They are elaborate, rather than ingenious; and seem to have been diligently meditated, and carefully arranged, rather than to have been conceived in any fervour of imagination, or poured forth in any conviction of their infallibility. The utmost pains are taken, therefore, to render every thing intelligible and precise; and more anxiety is shown that nothing necessary shall be omitted, than that all superfluity should be excluded. All cavil is prevented by a jealous strictness of expression; and a few homely illustrations are commonly sufficient to expose those illusions, by which a false philosophy is supported in so many of her unsubstantial speculations.

The progress of time, and the improving ingenuity of scepticism have given a new aspect to all our philosophical productions. It is no longer enough for a writer on morality or religion to explain and enforce his own conceptions upon those important subjects; he must make way for their reception by the extirpation of a multitude of errors, and must be upon the alert at every stage of his progress. He must advance with circumspection as well as boldness, and fortify every position against the attacks of a vigilant and formidable adversary. As the forms of error, too, are infinite and contradictory, he must incessantly be changing his posture of defence, or direction of attack; what serves for the confutation of one set of opponents, being frequently the pretext of hostility to a second. In this situation the management of such subjects can only be entrusted with safety to skilful reasoners, and expert logicians; men, who will neither give quarter to sophistry, nor consume their forces in unprofitable contentions; who will confine their hostility to the proper object of resentment, and neither use their victories with insolence, nor refuse to yield

what they have neither power nor inducement to retain. The great art in all controversies of this nature, is, first, to bring the argument to a point, and then to urge it steadily and closely to an issue. We do not know any writer who has observed both precepts with greater judgment and address than Dr. Paley. All this we say in reference to his former publications: that which is now before us will not detract from his reputation, and probably will not extend it.

On the subject of Natural Theology, no one looks for originality, and no one pretends to discovery. Its great disadvantage is its extreme simplicity, and the vast multiplicity of obvious and decisive evidences that may every where be found for its illustration. The great book of the universe lies open to all mankind; and he who cannot read in it the name and the titles of its Author, will probably derive but little benefit from the labours of any commentator: their instructions may elucidate a few dark passages, and exalt our admiration of many that we already perceive to be beautiful; but the bulk of the volume is legible, without assistance: and, much as we may find out by study and meditation, it will still be as nothing, in comparison with what is forced upon our apprehension. No thinking man, we conceive, can doubt that there are marks of design in the universe; and any enumeration of the instances in which this design is manifest, appears, at first sight, to be both unnecessary and impossible. A single example seems altogether as conclusive as a thousand: and he that cannot discover any traces of contrivance in the formation of an eye, will probably retain his atheism at the end of a whole system of physiology. We are apt therefore to suspect, that the chief value of those publications that aim at establishing the being of an intelligent Creator, by a copious induction of the marks of intelligence in the creation, consists, either in their subserviency to the pleasures of devout meditation, or in the novelty, arrangement, and importance of the physical truths they contain. Upon a more mature consideration, however, we are persuaded that this is but a secondary merit in the work that is now before us, and that the reverend author has done a great, and by no means an unnecessary service, to the cause of religion by its publication. It may be worth while to consider in what its utility principally consists, and what is the chief difference between the task of an advocate of natural theology in former, and in the present times.

The ancient sceptics seem to have had nothing to set up against a designing Deity, but the obscure omnipotency of Chance, and the experimental combinations of a chaos of restless atoms. The task of the Theistic philosophers was, therefore, abundantly easy in those days; and though their physical science was by no means very correct or extensive, they seem to have performed it in a

bold and satisfactory manner. They appealed at once to the order and symmetry of nature, and to the regularity and magnificence of the grand structure of the universe. The great phenomena of the heavens, in particular, appear to have arrested their attention; and the magnitude and uniformity of the planetary movements, seem to have afforded a sufficient proof of Divine power and intelligence. It did not appear to them any objection to this argument, that nothing analogous to those phenomena could be found among the products of human intelligence, or that they were unable to explain the means which Divine Wisdom had employed to produce them. '*Quis hunc hominem dixerit,*' says Cicero, '*qui cum tam certos cœli motus, tam ratos astrorum ordines, tamque inter se connexa et apta viderit, neget his ullam inesse rationem, eaque casu fieri dicat, quæ quanto consilio gerantur, nullo consilio assequi possumus?*'

In this broad and general way did the theists of antiquity propose their evidence of the Divine intelligence; finding it easier, and probably thinking it more magnificent, and better suited to the dignity of the Deity, that the proofs of his existence should be derived from the great and sublime parts of his creation, than from the petty contrivances of animal or vegetable organization. If a sovereign mind was allowed to have planned the great system of the universe, they had no objection to admit, that bees and worms might be generated spontaneously, or even that men and animals might be hatched by the heat of the sun on the fertile banks of the Nile.

In the mean time, physical science was making slow but continual advances; and curious inquirers were able to penetrate into the more immediate causes of many of the appearances of nature. Elated with these discoveries, which ought to have increased their veneration for the supreme Contriver of the whole, they immediately fancied they had found out the great secret of nature; and, ascribing imaginary qualities and energies to different classes of bodies, they dethroned the Deity by the agency of secondary causes, and erected a system of materialism in his stead. It was in those circumstances, we are persuaded, that certain false opinions as to the opposition of religion and philosophy originated, though they have been revived and maintained, in later times, by causes of a different description. Those whose dispositions inclined them to devout contemplation, were accustomed to look upon the wonders of nature in the gross; to consider them as environed with a certain awful mystery; and to discountenance every attempt to pry into their origin, as a presumptuous and profane interference with the councils of Omnipotence. Inquisitive naturalists, on the other hand, were apt to forget the Lawgiver in their zealous admiration of the law; and, mocking at the pious horror of the ignorant, considered the mighty fabric of the universe as little

better than a piece of mechanical jugglery, that could only command our admiration, while the cause of its movements was concealed.

This, however, was an error that was rectified by the progress of those very speculations by which it had apparently been produced. When men began to reason more correctly upon the appearances of nature, they soon learned to perceive that the minute texture of animal and vegetable bodies contained more wonderful indications of contrivance and design than the great masses of astronomy; and that, from the greater complication of their parts, and our more intimate experience of their uses, they were infinitely better fitted to attest the adaptation of means to ends, than the remoter wonders of the heavens. Boyle and Newton carried this principle of philosophical piety along with them into all their speculations. The microscopical observers caught the same spirit. Ray and Derham successively digested all the physics of their day into a system of natural theology. A late editor of Dr. Derham has inserted most of the modern discoveries: and, as nothing useful or meritorious can be safe from the zeal of injudicious admirers, a genius of Germany has recently presented the public with a demonstration of the being and attributes of the Deity, deduced from the history and habitudes of *insects*.

In this situation, it may at first sight appear to have been superfluous for Dr. Paley to come forward with a new work upon a subject in itself so simple, and already so learnedly discussed. It is to be observed, however, that most of the preceding publications are addressed to readers that are supposed to be already entirely convinced of the existence of a designing Creator, and seem to have been chiefly intended to promote a habit of pious meditation, and to afford materials for devout reflection on the goodness and wisdom of the Deity. They are not constructed, at least, with any express reference to the objections of atheistical writers, and neither guard against the cavils which they have made as to certain parts of the evidence, nor directly confute the false constructions they have attempted to put upon others. A work was still wanted, therefore, in which the evidences of a wise and beneficent Creator might be detailed with sufficient amplitude, while every thing was omitted that the most scrupulous scepticism could challenge, and in which the fallacy of every atheistical hypothesis might be distinctly exposed, both by a strict examination of its principle, and by the selection of such obvious phenomena as were inconsistent with the supposition of its truth. Such a work we conceive Dr. Paley had in view to compose when he entered upon this subject, and such undoubtedly is the plan and the tendency of the publication now before us.

After stating, in a very forcible and clear manner, the nature

of the argument that leads us from the marks of design up to a designing author, and showing that the succession or generation of organized bodies can never account for the original contrivance of their formation, the learned author proceeds to consider the devices that atheistical reasoners have fallen upon to elude the force of the conclusion.

'One atheistic way of replying to our observations upon the works of nature, and to the proofs of a Deity which we think that we perceive in them, is to tell us, that all which we see must necessarily have had some form, and that it might as well be its present form as any other. Let us now apply this answer to the eye, as we did before to the watch. Something or other must have occupied that place in the animal's head: must have filled up, we will say, that socket: we will say, also, that it must have been of that sort of substance which we call animal substance, as flesh, bone, membrane, cartilage, &c: but that it should have been an *eye*, knowing as we do what an eye comprehends, viz. that it should have consisted, first of a series of transparent lenses (very different, by the by, even in their substance, from the opaque materials with which the rest of the body, is, in general at least, composed; and with which the whole of its surface, this single portion of it excepted, is covered): secondly, of a black cloth or canvass (the only membrane of the body which is black) spread out behind these lenses, so as to receive the image formed by pencils of light transmitted through them; and placed at the precise geometrical distance at which, and at which alone, a distinct image could be formed, namely, at the concourse of the refracted rays; thirdly, of a large nerve communicating between this membrane and the brain; without which the action of light upon the membrane, however modified by the organ, would be lost to the purposes of sensation. That this fortunate conformation of parts should have been the lot, not of one individual out of many thousand individuals, like the great prize in a lottery, or like some singularity in nature, but the happy chance of a whole species; nor of one species out of many thousand species, with which we are acquainted, but of by far the greatest number of all that exist; and that under varieties, not casual or capricious, but bearing marks of being suited to their respective exigencies; that all this should have taken place, merely because something must have occupied those points in every animal's forehead; or, that this should be thought to be accounted for, by the short answer, 'that whatever was there must have had some form or other,' is too absurd, to be made more so by any argumentation. We are not contented with this answer, we find no satisfaction in it, by way of accounting for appearances of organization far short of those of the eye, such as we observe in fossil shells, petrified bones or other substances which bear the vestiges of animal or vegetable recrements, but which, either in respect of utility, or of the situation in which they are discovered, may seem accidental enough. It is no way of accounting even for these things, to say that the stone, for instance, which is shown to us, (supposing the question to be concerning a petri-

fication), must have contained some internal conformation or other. Nor does it mend the answer to add, with respect to the singularity of the conformation, that, after the event, it is no longer to be computed what the chances were against it. This is always to be computed, when the question is, whether an useful or imitative conformation be the produce of chance or not. I desire no greater certainty in reasoning, than that by which chance is excluded from the present disposition of the natural world. Universal experience is against it. What does chance ever do for us? In the human body, for instance, chance, *i. e.* the operation of causes without design, may produce a wen, a wart, a mole, a pimple, but never an eye. Amongst inanimate substances, a clod, a pebble, a liquid drop, might be; but *never* was a watch, a telescope, an organized body of any kind, answering a valuable purpose by a complicated mechanism, the effect of chance. In no assignable instance hath such a thing existed, without intention somewhere.

'There is another answer, which has the same effect as the resolving of things into chance: which answer would persuade us to believe, that the eye, the animal to which it belongs, every other animal, every plant, indeed every organized body which we see, are only so many out of the possible varieties and combinations of being, which the lapse of infinite ages has brought into existence; that the present world is the relic of that variety; millions of other bodily forms and other species having perished, being, by the defect of their constitution, incapable of preservation, or of continuance by generation. Now, there is no foundation whatever for this conjecture, in any thing which we observe in the works of nature; no such experiments are going on at present; no such energy operates as that which is here supposed, and which should be constantly pushing into existence new varieties of beings; nor are there any appearances to support an opinion, that every possible combination of vegetable or animal structure has formerly been tried. Multitudes of conformations, both of vegetables and animals, may be conceived capable of existence and succession, which yet do not exist. Perhaps, almost as many forms of plants might have been found in the fields, as figures of plants can be delineated upon paper. A countless variety of animals might have existed, which do not exist. Upon the supposition here stated, we should see unicorns and mermaids, sylphs and centaurs; the fancies of painters, and the fables of poets, realized by examples. Or, if it be alleged that these may transgress the limits of possible life and propagation, we might, at least, have nations of human beings without nails upon their fingers with more or fewer fingers and toes than ten; some with one eye, others with one ear, with one nostril, or without the sense of smelling at all. All these, and a thousand other imaginable varieties, might live and propagate. We may modify any one species many different ways, all consistent with life, and with the actions necessary to preservation, although affording different degrees of conveniency and enjoyment to the animal. And if we carry these modifications through the different species which are known to subsist, their number would be incalculable.

No reason can be given, why, if these deperdits ever existed, they have now disappeared. Yet, if all possible existencies have been tried, they must have formed part of the catalogue.' P. 65—70.

'To the marks of contrivance discoverable in animal bodies, and to the argument deduced from them, in proof of design, and of a designing Creator, this turn is sometimes attempted to be given, viz. that the parts were not intended for the use, but that the use arose out of the parts. This distinction is intelligible. A cabinet-maker rubs his mahogany with fish skin; yet it would be too much to assert, that the skin of the dog-fish was made rough and granulated on purpose for the polishing of wood, and the use of cabinet-makers. Therefore the distinction is intelligible. But I think that there is very little place for it in the works of nature. When roundly and generally affirmed of them, as it hath sometimes been, it amounts to such another stretch of assertion, as it would be to say, that all the implements of the cabinet-maker's workship, as well as his fish skin, were substances accidentally configurated, which he had picked up, and converted to his use; that his adzes, saws, planes, and gimblets, were not made, as we suppose, to hew, cut, smooth, shape out, or bore wood with; but that, these things being made, no matter with what design, or whether with any, the cabinet-maker perceived that they were applicable to his purpose, and turned them to account.

'But again—So far as this solution is attempted to be applied to those parts of animals, the action of which does not depend upon the will of the animal, it is fraught with still more evident absurdity. Is it possible to believe, that the eye was formed without any regard to vision; that it was the animal itself which found out, that though formed with no such intention, it would serve to see with; and that the use of the eye, as an organ of sight, resulted from this discovery, and the animal's application of it? The same question may be asked of the ear; the same of all the senses. None of the senses fundamentally depend upon the election of the animal; consequently neither upon his sagacity nor his experience. It is the impression which objects make upon them, that constitutes their use. Under that impression he is passive. He may bring objects to the sense, or within its reach; he may select these objects: but over the impression itself he has no power, or very little; and that properly is the sense.

'Secondly, there are many parts of animal bodies which seem to depend upon the will of the animal in a greater degree than the senses do, and yet, with respect to which, this solution is equally unsatisfactory. If we apply the solution to the human body, for instance, it forms itself into questions upon which no reasonable mind can doubt; such as, whether the teeth were made expressly for the mastication of food, the feet for walking, the hands for holding; or whether, these things being as they are, being in fact in the animal's possession, his own ingenuity taught him that they were convertible to these purposes, though no such purposes were contemplated in their formation.

'All that there is of the appearance of reason in this way of considering the subject is, that, in some cases, the organization seems to determine the habits of the animal, and its choice, to a particular mode of life; which, in a certain sense, may be called, "the use arising out of the part." Now, to all the instances, in which there is any place for this suggestion, it may be replied, that the organization determines the animal to habits salutary and beneficial to itself; and that this effect would not be seen so regularly to follow, if the several organizations did not bear a concerted and contrived relation to the substances by which the animal was surrounded. They would, otherwise, be capacities without objects; powers without employment. The web foot determines, you say, the duck to swim: but what would that avail, if there were no water to swim in: the strong, hooked bill, and sharp talons of one species of bird, determine it to prey upon animals: the soft, straight bill, and weak claws, of another species, determine it to pick up seeds: but neither determination could take effect in providing for the sustenance of the birds, if animal bodies and vegetable seeds did not lie within their reach. The peculiar conformation of the bill, and tongue, and claws of the woodpecker, determines that bird to search for his food amongst the insects lodged behind the bark, or in the wood of decayed trees: but what would this profit him, if there were no trees, nor decayed trees, no insects lodged under their bark, or in their trunk? The proboscis with which the bee is furnished, determines him to seek for honey: but what would that signify, if flowers supplied none? Faculties, thrown down upon animals at random, and without reference to the objects amidst which they are placed, would not produce to them the services and benefits which we see: and if there be that reference, then there is intention.

'Lastly, The solution fails entirely, when applied to plants. The parts of plants answer their uses, without any concurrence from the will or choice of the plant.' P. 72—76.

Another great objection to the popular argument from the appearances of design, is derived from the imperfection of human faculties, and the consequent impossibility of perceiving in what manner intelligence has been employed in the wonderful works of creation. All our ideas of intelligence being derived from the consciousness of its existence in human creatures, it is plain that the analogical argument for its existence in the Author of the universe is more close, and more irresistible, when his works bear some obvious and undeniable analogy to the products of *our* power, industry, and skill; when we comprehend the end, and are able to judge of the efficacy and adaptation of the means. For this reason, Dr. Paley has, with great judgment, selected the *mechanical* functions and contrivances in organized bodies, as proofs of design, in preference to those peculiar and inexplicable properties which human art can neither bestow nor make use of. Though these latter undoubtedly produce the most wonderful effects, and afford to a pious

mind the most admirable specimens of God's wisdom and goodness, still they are undoubtedly less serviceable in the contest with atheists; they make the analogical argument more loose and remote, and give occasion to the introduction of delusive and unmeaning phrases. The unbeliever always finds his advantage in referring to a principle, of which it must be admitted that he and his antagonist are equally ignorant, and is enabled at least to perplex and prolong the combat, by attributing the works of the Deity to a principle of *irritability*, or a principle of *aggregation*, which he fancies can be conceived to operate without the control of intelligence. To *mechanical* phenomena the same evasive reasoning cannot be applied: the end to be accomplished is in these familiar and apparent, and the means by which it is accomplished are distinctly perceived and comprehended. If any arrangement of matter, however, can give us assurance of the agency of intelligence, the arrangement of living and organized bodies must afford that proof in its fullest perfection.

With a view to these observations, the author then proceeds to make a minute survey of the mechanical contrivances in the animal body, and particularly in the human frame; he goes over the admirable arrangement of the *bones*, the *muscles*, the *blood-vessels*, *intestines*, &c. and examines the peculiar structure of the different classes of animals, and the nice adaptation of each to the exigencies of its respective situation. From a detail of this sort, it is not easy to make any extracts. We select the following as instances of the reverend author's acute and vigilant observation.

'The variety, quickness, and precision, of which muscular motion is capable, are seen, I think, in no part so remarkably as in the *tongue*. It is worth any man's while to watch the agility of his tongue; the wonderful promptitude with which it executes changes of position, and the perfect exactness. Each syllable of articulated sound requires for its utterance a specific action of the tongue, and of the parts adjacent to it. The disposition and configuration of the mouth, appertaining to every letter and word, is not only peculiar, but, if nicely and accurately attended to, perceptible to the sight; insomuch that curious persons have availed themselves of this circumstance to teach the deaf to speak, and to understand what is said by others. In the same person, and after his habit of speaking is formed, one, and only one position of the parts, will produce a given articulate sound correctly. How instantaneously are these positions assumed and dismissed! how innumerous are the permutations, how various, yet how infallible! Arbitrary and antic variety is not the thing we admire; but variety obeying a rule, conducing to an effect, and commensurate with exigencies infinitely diversified. I believe also that the anatomy of the tongue corresponds with these observations upon its activity. The muscles of the tongue are so numerous, and so implicated with one another, that they cannot be traced by the nicest dissection: nevertheless, which is a great

perfection of the organ, neither the number, nor the complexity, nor what might seem to be the entanglement of its fibres, in anywise impede its motion, or render the determination or success of its efforts uncertain.' P. 141—143.

'Or let a person only observe his own hand while he is *writing*; the number of muscles which are brought to bear upon the pen; how the joint and adjusted operation of several tendons is concerned in every stroke, yet that five hundred such strokes are drawn in a minute. Not a letter can be turned without more than one or two or three tendinous contractions, definite, both as to the choice of the tendon, and as to the space through which the contraction moves; yet how currently does the work proceed! and, when we look at it, how faithful have the muscles been to their duty, how true to the order which endeavour or habit hath inculcated! For, let it be remembered, that, whilst a man's handwriting is the same, an exactitude of order is preserved, whether he write well or ill.' P. 147—148.

'Another exquisite structure, differing, indeed, from the four preceding instances, in that it does not relate to the conveyance of fluids, but still belonging, like these, to the class of pipes or conduits of the body, is seen in the *larynx*. We all know, that there go down the throat two pipes, one leading to the stomach, the other to the lungs: the one being the passage for the food, the other for the breath and voice: we know also, that both these passages open into the bottom of the mouth; the gullet, necessarily, for the conveyance of food; and the windpipe, for speech, and the modulation of sound, not much less so: therefore, the difficulty was, the passages being so contiguous, to prevent the food, especially the liquids, which we swallow into the stomach, from entering the windpipe, *i. e.* the road to the lungs; the consequence of which error, when it does happen, is perceived by the convulsive throes that are instantly produced. This business, which is very nice, is managed in this manner.—The gullet (the passage for food) opens into the mouth like the cone or upper part of a funnel, the capacity of which forms indeed the bottom of the mouth. Into the side of this funnel, at the part which lies the lowest, enters the windpipe, by a chink or slit, with a lid or flap, like a little tongue, accurately fitted to the orifice. The solids or liquids which we swallow, pass over this lid or flap, as they descend by the funnel into the gullet. Both the weight of the food, and the action of the muscles concerned in swallowing, contribute to keep the lid close down upon the aperture, whilst any thing is passing; whereas, by means of its natural cartilaginous spring, it raises itself a little, as soon as the food is passed, thereby allowing a free inlet and outlet for the respiration of air by the lungs. And we may here remark the almost complete success of the expedient, viz. how seldom it fails of its purpose, compared with the number of instances in which it fulfils it. Reflect how frequently we swallow, how constantly we breath. In a city feast, for example, what deglutition, what anhelation! yet does this little cartilage, the epiglottis, so effectually interpose its office, so securely guard the entrance of the

windpipe, that, whilst morsel after morsel, draught after draught, are coursing one another over it, an accident of a crumb or a drop slipping into this passage, (which nevertheless must be opened for the breath every second of time), excites, in the whole company, not only alarm by its danger, but surprise by its novelty. Not two guests are choked in a century'. P. 190—192.

The author then proceeds to what he calls *prospective contrivances*. We give an instance of the excellent use he makes of this division.

'The eye is of no use, at the time when it is formed. It is an optical instrument made in a dungeon; constructed for the refraction of light to a focus, and perfect for its purpose, before a ray of light has had access to it; geometrically adapted to the properties and action of an element, with which it has no communication. It is about indeed to enter into that communication: and this is precisely the thing which evidences intention. It is *providing* for the *future* in the closest sense which can be given to these terms; for it is providing for a future change: not for the then subsisting condition of the animal; nor for any gradual progress or advance in that same condition; but for a new state, the consequence of a great and sudden alteration, which the animal is to undergo at its birth. Is it to be believed that the eye was formed, or, which is the same thing, that the series of causes was fixed by which the eye is formed, without a view to this change; without a prospect of that condition, in which its fabric, of no use at present, is about to be of the greatest; without a consideration of the qualities of that element, hitherto entirely excluded, but with which it was hereafter to hold so intimate a relation? A young man makes a pair of spectacles for himself against he grows old; for which spectacles he has no want or use whatever at the time he makes them. Could this be done, without knowing and considering the defect of vision to which advanced age is subject? Would not the precise suitableness of the instrument to its purpose, of the remedy to the defect, of the convex lens to the flattened eye, establish the certainty of the conclusion, that the case, afterwards to arise, had been considered beforehand, speculated upon, provided for? all which are exclusively the acts of a reasoning mind. The eye formed in one state, for use only in another state, and in a different state, affords a proof no less clear of destination to a future purpose; and a proof proportionably stronger, as the machinery is more complicated, and the adaptation more exact.

'What has been said of the eye, holds equally true of the *lungs*. Composed of air vessels, where there is no air: elaborately constructed for the alternate admission and exclusion of an elastic fluid, where no such fluid exists; this great organ, with the whole apparatus belonging to it, lies collapsed in the fœtal thorax: yet in order and in readiness for action, the first moment that the occasion requires its service. This is having a machine locked up in store for future use; which incontestibly proves, that the case was expected to occur, in

which this use might be experienced: but expectation is the proper act of intelligence. Considering the state in which an animal exists *before* its birth, I should look for nothing less in its body than a system of lungs. It is like finding a pair of bellows in the bottom of the sea; of no sort of use in the situation in which they are found; formed for an action which was impossible to be exerted; holding no relation or fitness to the element which surrounds them, but both to another element in another place.' P. 277—279.

He then proceeds to the chapter of *relations*, in which he points out the congruity and mutual subserviency of the different parts of the same animal; and of the whole, to the element and occupation to which it is destined. After this comes a section entitled *compensation*. The author explains it in this manner:

'*Compensation* is a species of relation. It is relation when the *defects* of one part, or of one organ, are supplied by the structure of another part, or of another organ. Thus,

'The short unbending neck of the *elephant* is compensated by the length and flexibility of his *proboscis*. He could not have reached the ground without it: or if it be supposed that he might have fed upon the fruit, leaves, or branches of trees, how was he to drink? Should it be asked, why is the elephant's neck so short? it may be answered, That the weight of a head so heavy could not have been supported at the end of a longer lever. To a form, therefore, in some respects, necessary, but in some respects also inadequate to the occasions of the animal, a supplement is added, which exactly makes up the deficiency under which he laboured.

'If it be suggested, that this proboscis may have been produced in a long course of generations, by the constant endeavour of the elephant to thrust out his nose, (which is the general hypothesis by which it has lately been attempted to account for the forms of animated nature), I would ask, how was the animal to subsist in the mean time, during the process, *until* this prolongation of snout were completed? What was to become of the individual, whilst the species was perfecting?' P. 298—299.

There is an interesting chapter upon *instinct*, in which the author very successfully confutes the opinion of those philosophers, who refer all the actions of animals to a volition excited by a present object; and continues his examination of the structure of *insects* and *plants*. There is a short chapter upon the *elements*, and a long one upon *astronomy*, which the author introduces with the following judicious remarks, which may serve to point out the superiority which his systematic argument possesses over the pious learning of his predecessors.

'My opinion of astronomy has alway been, that it is *not* the best medium through which to prove the agency of an intelligent Creator; but that, this being proved, it shows, beyond all other sciences, the

magnificence of his operations. The mind which is once convinced, it rises to sublimer views of the Deity, than any other object affords; but is not so well adapted as some other subjects are, to the purpose of argument. We are destitute of the means of examining the constitution of the heavenly bodies. The very simplicity of their appearance is against them. We see nothing but bright points, luminous circles, or the phases of spheres reflecting the light which falls upon them. Now, we deduce design from relation, aptitude, and correspondence of *parts;* some degree, therefore, of *complexity*, is necessary to render a subject fit for this species of argument. But the heavenly bodies do not, except perhaps in the instance of Saturn's ring, present themselves to our observation as compounded of parts at all. This, which may be a perfection in them, is a disadvantage to us, as inquirers after their nature. They do not come within our mechanics.

'And what we say of their forms, is true of their *motions.* Their motions are carried on without any sensible intermediate apparatus: whereby we are cut off from one principal ground of argumentation and analogy. We have nothing wherewith to compare them; no invention, no discovery, no operation or resource of art, which, in this respect resembles them. Even those things which are made to imitate and represent them, such as orreries, planetaria, celestial globes, &c. bear no affinity to them, in the cause and principle by which their motions are actuated! P. 209—210.

The next chapter, which we consider as the most important of the whole work, is rather unfortunately entitled, 'of the *Personality* of the Deity.' Its object is to prove, that the cause of all things is not a general and incomprehensible essence, efficacy, or principle, but a real designing agent, having an existence independent of the beings in which the marks of design have been established. In this view, he first endeavours to show that *the universe itself* cannot be the Deity, because, in its constitution, it testifies a contrivance; and this necessarily implies a *pre-existing* contriver: the same argument evinces, that the present arrangement of things could not have been eternal. The learned author then observes, that atheistical reasoners frequently endeavour to impose upon their antagonists, by a repetition of mere *names*, instead of argument or conjecture; as when they refer the order of organized bodies to 'a law,' or assert that the whole system of the universe may be explained from 'the *mechanism* of its parts.' A *law* presupposes an agent; for it is only the mode according to which an agent proceeds; and *mechanism* can produce nothing, unless there be a *power* to whose operations it is subservient. The same censure is passed upon those who would substitute such words as 'principle, process, or generation,' for a real explanation of the cause of any existing phenomena. The 'internal molds,' by which Buffon keeps his organic particles

from running into new combinations, meet with no better treatment; and 'the appetencies' of Dr. Darwin are explained and disposed of in this manner—

'Pieces of soft, ductile matter, being endued with propensities or appetencies for particular actions, would, by continual endeavours carried on through a long series of generations, work themselves gradually into suitable forms; and at length acquire, though perhaps by obscure and almost imperceptible improvements, an organization fitted to the action which their respective propensities led them to exert. A piece of animated matter, for example, that was endued with a propensity to *fly*, though ever so shapeless, though no other, we will suppose, than a round ball to begin with, would, in a course of ages, if not in a million of years, perhaps in a hundred millions of years (for our theorists, having eternity to dispose of, are never sparing in time), acquire *wings*. The same tendency to loco-motion in an aquatic animal, or rather in an animated lump which might happen to be surrounded by water, would end in the production of *fins*; in a living substance, confined to the solid earth, would put out *legs* and *feet*; or, if it took a different turn, would break the body into ringlets, and conclude by *crawling* upon the ground.' P. 463-464.

'The scheme under consideration is open to the same objection with other conjectures of a similar tendency, viz. a total defect of evidence. No changes, like those which the theory requires, have ever been observed. All the changes in Ovid's Metamorphoses might have been effected by these appetencies, if the theory were true: yet not an example, nor the pretence of an example, is offered of a single change being known to have taken place. Nor is the order of generation obedient to the principle upon which this theory is built. The mammæ of the male have not vanished by inusitation; *nec curtorem, per multa sæcula, Judæorum propagini deest præputium*. It is easy to say, and it has been said, that the alterative process is too slow to be perceived; that it has been carried on through tracts of immeasurable time; and that the present order of things is the result of a gradation; of which no human record can trace the steps. It is easy to say this; and yet it is still true, that the hypothesis remains destitute of evidence.' P. 465-466.

The analogies upon which it has been supported, are said to be the following.—The bunch of the camel produced, in process of time, by carrying burdens; the naked thighs of the crane, heron, stork, &c. occasioned by their ancient practice of wading in the water; and the pouch of the pelican distended, by the efforts of many generations to cram a large quantity of fish into the mouth. On this statement Dr. Paley remarks, in the first place,

'That the instances themselves are unauthenticated by testimony; and, in theory, to say the least of them, open to great objections. Who ever read of camels without bunches, or with bunches less than

those with which they are at present usually formed? a bunch, not unlike the camel's, is found between the shoulders of the buffaloe; of the origin of which, it is impossible to give the account which is here given. In the second example; Why should the application of water, which appears to promote and thicken the growth of feathers upon the bodies and breasts of geese and swans, and other water fowls, have divested of this covering the thighs of cranes? The third instance, which appears to me as plausible as any that can be produced, has this against it, that it is a singularity restricted to the species; whereas, if it had its commencement in the cause and manner which have been assigned, the like conformation might be expected to take place in other birds which feed upon fish. How comes it to pass, that the pelican alone was the inventress, and her descendants the only inheritors, of this curious resource?

'But it is the less necessary to controvert the instances themselves, as it is a straining of analogy beyond all limits of reason and credibility, to assert that birds, and beasts, and fish, with all their variety, and complexity of organization, have been brought into their forms, and distinguished into their several kinds and natures, by the same process (even if that process could be demonstrated, or had ever been actually noticed), as might seem to serve for the gradual generation of a camel's bunch, or a pelican's pouch.

'The solution, when applied to the works of nature *generally* is contradicted by many of the phenomena, and totally inadequate to others. The *ligaments* or strictures, by which the tendons are tied down at the angles of the joints, could by no possibility, be formed by the motion or exercise of the tendons themselves; by any appetency exciting these parts into action; or by any tendency arising therefrom. The tendency is all the other way, the conatus in constant opposition to them. Length of time does not help the case at all, but the reverse. The *valves* also in the blood-vessels could never be formed in the manner which our theorist proposes. The blood, in its right and natural course, has no tendency to form them; when obstructed or refluent, it has the contrary. These parts could not grow out of their use, though they had eternity to grow in.

'The *senses* of animals appear to me altogether incapable of receiving the explanation of their origin which this theory affords. Including under the word 'sense' the organ and the perception, we have no account of either. How will our philosopher get a *vision*, or make an eye? How should the blind animal affect sight, of which blind animals, we know, have neither conception nor desire? Affecting it, by what operation of its will, by what endeavour to see, could it so determine the fluids of its body, as to inchoate the formation of an eye? Or, suppose the eye formed, would the perception follow? The same of the other senses. And this objection holds its force, ascribe what you will to the hand of time, to the power of habit, to changes too slow to be observed by man, or brought within any comparison which he is able to make of past things with the present; concede what you please

to these arbitrary and unattested suppositions, how will they help you? Here is no inception. No laws, no course, no powers of nature which prevail at present, nor any analogous to these, could give commencement to a new sense. And it is in vain to inquire, how that might proceed, which could never *begin*.

'I think the senses to be the most inconsistent with the hypothesis before us, of any part of the animal frame. But other parts are sufficiently so. The solution does not apply to the parts of animals, which have little in them of motion. If we could suppose joints and muscles to be gradually formed by action and exercise, what action or exercise could form a skull, or fill it with brains? No effort of the animal could determine the clothing of its skin. What conatus could give prickles to the porcupine or hedgehog; or to the sheep its fleece?

'In the last place, What do these appetencies mean, when applied to plants? I am not able to give a signification to the term, which can be transferred from animals to plants, or which is common to both. Yet a no less successful orgnization is found in plants, than what obtains in animals. A solution is wanted for one, as well as the other.

'Upon the whole, after all the struggles of a reluctant philosophy, the necessary resort is to a Deity. The marks of *design* are too strong to be got over. Design must have had a designer. That designer must have been a person. That person is God.' P. 469—473.

With these observations the learned author concludes his evidence of the *existence* of an intelligent Creator, and proceeds, in the remaining chapters of the book, to inquire into the *attributes* which natural religion authorizes us to ascribe to him. Of the *natural attributes*, he observes, that though their ordinary names imply an absolute infinity in the qualities they describe, we merely mean that they exist in a degree beyond all comparison greater than we experience in ourselves, and in a degree to which we are not authorized to assign any limits whatsoever. The *unity* of the Deity he conceives to be sufficiently established by the uniformity of plan that is observable in the universe.

The *goodness* of the Deity forms the subject of the last chapter; and the proof of it is rested upon these two propositions: first, That in a vast plurality of instances, in which contrivance is perceived, the design of the contrivance is beneficial; and, secondly, That the Deity has superadded *pleasure* to animal sensations, beyond what is necessary for any other purpose; or when the purpose, so far as it was necessary, might have been effected by the operation of pain. In the illustration of these positions we meet with a great number of very acute and judicious remarks, and with many traits of the author's simplicity and benevolence of character. The language, also, is more animated throughout this discussion, than in the other parts of the work. For the existence of evil in the creation of a Being whose power and bene-

volence are unlimited, it is not easy to account satisfactorily; and though many consolatory and profound observations are made upon it in this chapter by Dr. Paley, we do not think that this great problem has yet received a complete solution. Without entering at all into the general argument, we may merely observe that the learned author has founded his reasoning for the *absolute* goodness of the Deity, upon the marks of beneficent contrivance, *in a great plurality of instances:* and that he concludes the argument with observing, that 'what is benevolence at all, must in him be *infinite* benevolence, by reason of the infinite, that is to say the incalculably great number of objects upon which it is exercised.' Now, this, it appears to us, is a very dangerous manner of reasoning, since the infinite *malevolence* of the Deity might be inferred, in the same manner, from the incalculably great number of beings who are occasionally subjected to suffering.—The conclusion of the whole work consists of a short and pious exposition of the important benefits and comforts that may be derived from an habitual consideration of the being and attributes of the Deity, and of the facilities which are afforded by a firm belief in the truths of natural religion, both for the reception and the confirmation of our faith in revelation.

As a collection of striking facts and powerful arguments for the existence of a wise and beneficent Creator, this publication is certainly entitled to a very favourable reception. The task, perhaps, was not very difficult, and the materials were certainly abundant; but the very extent of the subject might have perplexed an ordinary reasoner; and the want of method and selection in former compilations had actually rendered a great part of them unserviceable. Dr. Paley's chief excellence consists in the judicious disposition of his forces, and the skill and confidence with which he has extended his array to every point which atheism had affected to menace. The champions of natural theology never had any reason, indeed, to doubt of the sufficiency of their force; but it may be questioned if they ever knew so well, before, by what precise movements they might secure the discomfiture of their assailants. If we were inclined to point out any defects in a performance which has gratified us so much, both in its plan and its execution, we would observe, that the *metaphysical* objections of the atheistical philosophers are not perhaps sufficiently weighed and refuted: it is probable that this was thought less necessary in a work intended for general perusal; but as this treatise is announced as the completion of a general system in Ethics and Theology, we cannot help thinking that it ought not to have left any plausible objection unanswered.

The physiology, in so far as we are able to judge, is extremely correct throughout; and it was not without surprise that we

found the reverend author so accurately and familiarly acquainted with the most recent discoveries in science and improvements in art. To every well constituted mind, it must be a pleasing and animating spectacle, to see that vigorous understanding, that had been trained and exercised in other studies, turning, at an advanced period of life, towards those researches that were necessary to complete his speculations, and, in spite of the weight of years and infirmities, pursuing with unbroken ardour that detail of information, for the want of which he might so well have been forgiven.

The language of this book is by no means remarkable for dignity or elegance. Perspicuity and conciseness, seem to have been the only accomplishments of style which the author was ambitious of acquiring; and to these his praise must be confined. There is a great carelessness of composition throughout the whole volume, and a colloquial homeliness of diction, upon some occasions, that does not seem altogether suitable either to the gravity of the subject, or the dignity of the writer.

ART. IV. *The Picture of Petersburg.* From the German of Henry Storch. 8vo. 590 pp. Longman. 1801.

THE city of Peter the Great owes much to art and little to nature. That prince, in order to render his subjects a commercial nation, transferred the Imperial residence from the genial climate, fertile territory and central situation of Moscow, to the swamps and morasses of Ingria. An unexampled expenditure of money and labour has confined the Neva within lofty banks, in some places faced with granite; stagnant lakes have been converted into useful canals, supurb palaces have usurped the place of the Finnish huts; and where the reeds and bulrushes clustered in the marshes, the Dutch garden now displays its clipped hedges, figured yews, and insipid regularity; whilst expensive hot-houses pour forth the most delicate productions of tropical climates.

Few capitals of Europe can boast of a greater number of magnificent mansions; the different royal residences are distinguished from the rest, by the taste displayed in their construction, and by the variety of their styles and decorations. On a marble palace, reared for the accommodation of Gregory Orlof, 'the Empress,' says our author, 'had the confidence to cause this inscription to be cut—*From grateful friendship.*' Should our readers be at a loss to reconcile this remark with the style of the dedication, let them recollect, that, ere the book had assumed its present form, Catharine the Second was no more.

'We should probably come nearest to the truth, if we admit the present (1800) population of St. Petersburg at 230,000 persons. This residence,' (for Moscow is still considered as the metropolis), 'consequently, by the amount of its population, holds the sixth rank among the capital cities of Europe; since, in this respect, she stands only below Constantinople, London, Paris, Naples, and Vienna.' Does Professor Storch mean by this arrangement to represent the population of Constantinople as superior to that of London. 'Next to Vienna comes Amsterdam, which according to Restel and others, contains about 212,000 inhabitants; then follow, in proportion to the greatness of their population, Rome, Venice, Berlin, Madrid, and Lisbon.' Of the population assigned to St. Petersburg 29,000 are foreigners, and of these 17,000 are Germans: the annual mortality is stated so low as 28 in 1000. A hundred marriages are computed to produce in Petersburg 408 children, and one is annually born for every 31 persons. In the last calculation, Professor Storch appears to have overlooked an observation, which results from his own statement, and greatly enhances the acknowledged fertility of the Russian females. By the census of 1789, the number of males was double that of females; and we have no reason to suppose that the proportion has been changed since. The same circumstance certainly does not occur in anyother capital of Europe; and since the number of births, in proportion to the whole population, corresponds with that observed elsewhere, it would follow, that the Russian females are vastly more prolific than their neighbours.

With regard to the situation of the lower classes, some inconsistency is perceptible in our author's account. At one time, he commiserates their circumstances, without specifying the causes of their misery: at another he represents them as the most ingenious, most industrious, merriest, and richest of plebeian citizens, since there is always a great demand for labour, and the daily wages amount to half a crown, whilst the necessaries of a Russian labourer may be procured for threepence. The women, even of the lowest condition, use rouge; a fact, not very reconcilable with the beauty of their natural complexions, praised by Mr. Storch.

Amongst the middle ranks, a taste for dissipation and conviviality is the most prominent characteristic. Commerce has wrought her usual enchantments, in rendering articles of luxury, articles of necessity; and enhancing the price of both by depreciating the value of specie, and by introducing a style of profusion incompatible with economy. Hospitality is entirely a Russian virtue; but its effects are confined to those who can afford to keep a carriage, and to lose their money at cards. Even a philosopher, if he would philosophise in good company, must, at

Petersburg, take care frequently to recruit his card-purse, and not to discover too much penetration as to the causes of his ill success. Eight hundred pounds a-year is the smallest sum on which a family of the slightest pretensions to gentility can be supported. High birth is here in no estimation; a liberal scale of expence is essential to admittance into genteel circles; and rank derived from station finds universally a willing homage. This respect for official station, and indifference for noble birth, appears a paradox to Professor Storch. Montesquieu, however, would easily resolve it by the principles of despotic governments, where all dignities emanate from, and revert to the sovereign. Clubs, where persons of both sexes assemble to dinner, are very generally resorted to; people of the highest rank there mingle with traders and artizans; and the result has been an universal refinement of manners, and much polished urbanity.

The highest class are usually possessed of fortunes which would be considered as princely in other countries. Their domestics consist of boors from their own estates, and sometimes amount to several hundreds. The same magnificence pervades the whole establishment, and their tables display the productions of every climate. The public and charitable institutions we deem it superfluous to particularize, because they are not now described for the first time; and the municiple constitution of Petersburg would afford little amusement.

Professor Storch has drawn his picture with great distinctness, in lively colours, and we presume with an accuracy proportioned to his long residence. His readers will find nothing wanting to complete their idea of this luxurious capital, though they may sometimes complain of prolixity, and sometimes of repetition.

ART. V. *The Divina Commedia of Dante Alighieri:* Consisting of the Inferno—Purgatoria—and Paradiso. Translated into English verse, with preliminary essays, notes, and illustrations. By the Reverend Henry Boyd, A. M. Chaplain to the Right Honourable the Lord Viscount Charleville. 3 vol. 8vo. London: Caddel junior and Davies. 1802.

THE rude poetry of early ages possesses some high excellencies which can never be attained to an equal degree in the more polished state of the art. That energy and simplicity, which are then its characteristics, are apt to be weakened and effaced, as men advance in the refinements of society, and in the arts of composition. True genius, indeed, will always be distinguished by vigour and animation; and good taste will, in every age, reject the glare of artificial ornament. But what poet, studiously com-

posing in his closet, can hope to transfuse into a subject, which perhaps, for the first time, has presented itself to his fancy, that keenness and natural expression which must distinguish the songs of those bards who, in a circle of brother-warriors, break out into enthusiastic descriptions of the battles and deaths of heroes, which they may either themselves have witnessed, or may recollect from the tales of their fathers?

A great part of the beauty of such compositions perishes, no doubt, with the occasions which produced them; and the extravagance and barbarity with which they are commonly much defaced, render them, upon the whole, unpleasant to a polite reader. But the early history of poetry abounds (like all other early histories) with miracles: and, from the darkness of a rude age, poets have been known to burst forth, who, while they retained the peculiar advantages of the period which produced them, have at the same time anticipated all the refinements which their art was afterwards to receive.

Homer will occur to every one as the most conspicuous example of this kind: and it is surely very remarkable, that the oldest poet with whom we are acquainted should still be by far the most accomplished. A *few* of his successors may have excelled him in certain qualifications; but he has beauties which have never been equalled; and he will, in general, be found to rank second even in those points in which he may be admitted to have a superior. Without a rival in ardour, vivacity, and eloquence, he is inferior only to Shakespeare in extensive observation, mastery over the passions, abundant fancy, and vigorous expression: Milton alone surpasess him in loftiness of thought, and Virgil in majesty.

It is not, perhaps, so generally understood, that a similar phenomenon distinguished the revival of letters. The rude romancers of the dark ages possessed, in some measure, the same poetical advantages that belonged to the original inventers of antiquity. It was indeed impossible but that, in their productions, the shattered vestiges of a more polished age should sometimes push out from the barbarous simplicity of their own. The contrast may occasionally have a good effect; as we are interested when we meet with the huts of shepherds among the remains of palaces and temples: but this can be the case only when the combination appears to be natural and accidental. We should be offended, were the shepherds to remove the mouldering ruins from their original position, and place them in fantastic shapes about their own paltry hovels. Thus, the simplicity of the romancers, and of many of the earlier poets of modern Europe, is defaced with scraps of learning, and unnatural pedantry. That a great and accomplished poet should arise in this state of the art, is perhaps

even more wonderful, than the occurrence of such an event at the first dawn of letters. It is easier to conceive that a world replete with harmony and beauty should spring out of nothing, at the command of the Deity, than that it should be moulded out of a jarring chaos of hot and cold, moist and dry. The mantle of poetry might drop from heaven on the shoulders of Homer; but we do not well comprehend what kind of sorcery was employed to raise from the infernal regions the dark but powerful spirit of Dante.

With a genius perfectly original, and strongly tinctured with the venerable simplicity of ancient times, this great poet possesses a degree of polish and elegance which might have done honour to a more advanced period. It was not in vain that he had studied with so much attention the correct model of his master Virgil. The Grecian sun of poetry had set upon the polar night of those ages; and it is an eminent proof of Dante's judgment, that he preferred the borrowed beams of this pure luminary to the other more native but smaller fires that sparkled in the Latin sky. Yet he has suffered no trammels to be put on the vigour and boldness of his own conceptions. Harmonious, yet homely; concise, yet clear; he has little vivacity, but is seldom tedious. Conducting his readers through scenes the most horrible, or the most exalted, he is constantly in possession of himself; and can describe the pains of hell and the joys of heaven with little more emotion than that with which at other times he enters into scholastic reasonings. A settled gravity pervades all his poem: he writes like a man employed in a serious business: and notions and images, which would transport the generality of poets beyond themselves, seem to pass through his mind like the common objects of his thoughts.

When we found that Dante had met with a translator, we opened the volumes with very humble expectations, and with a disposition for much indulgence. Our expectations, however, have been somewhat exceeded. Mr. Boyd has an equable easy style of versification, commonly somewhat dull, but always fluent. He expresses, in general very correctly, the meaning of his original; but he has an unfortunate habit of using obscure phrases which sometimes make that meaning not very perceptible. Dante, for instance, in the beginning of his poem, says, very simply, 'But that I may treat of the good which I found in this valley, I will mention the other things which I met with there.'—Mr. Boyd translates these words in the following unaccountable manner:

> 'Yet tell, O Muse! what intellectual store,
> I glean'd along the solitary shore;
> And sing in louder strains the *heavenly freight*.'

Upon the whole, however, it appears to us that Mr. Boyd has done as much for Dante as can well be done in English rhyme; and is justly entitled to praise for the diligence and perseverance with which he has executed his laborious task. It is probable, however, that a prose translation would give a better idea of the genius and manners of this poet, than any metrical one. M'Pherson's Homer, indeed, is very heavy, because Homer is a diffuse writer, and is languid without the help of versification. Dante is remarkably concise, and never uses one word more than is absolutely necessary. There is a naked severe kind of poetry, to which verse seems no very necessary appendage. The poetry of the Scriptures would lose much of its *effect* if it were *done into metre*, as is evident from the versions of the psalms in common use. But as we scarcely expect that any one will set about this task, though a much easier one than that which Mr. Boyd has accomplished, we recommend his translation of Dante to the attention of our readers.

The dissertations which he has prefixed to the several poems might have been omitted, without much detriment to the work. As a specimen of the translation, we subjoin the following passages, selected from each of the three poems.

I.

"*Thro' me the newly-damn'd for ever fleet,*
In ceaseless shoals, to Pain's eternal seat;
Thro' me they march, and join the tortur'd crew.
The mighty gulph offended Justice made;
Unbounded Pow'r the strong foundation laid,
And Love, by Wisdom led, the limits drew.

II.

"*Long ere the infant world arose to light,*
I found a being in the womb of night.
Eldest of all—but things that ever last!—
And I for ever last!——Ye heirs of Hell,
Here bid at once your ling'ring hope farewell,
And mourn the moment of repentance past!"

III.

"This salutation sad mine eyes amaz'd,
As on the dark PLUTONIAN arch I gaz'd,
In dark and dreadful characters pourtray'd.
"How dire the menace of the STYGIAN scroll!"
With deep concern I cry'd: The MANTUAN soul,
With friendly words my sinking spirit stay'd—

IV.

"Let no unmanly thought the place profane;
The fated hour commands you to restrain

The sickly fancies bred by wayward fear!
This is the scene I promis'd to unfold:
The regions of Eternal Wrath behold!
Nor tremble to survey her terrors near.

V.

"Here those, in search of Bliss who madly stray'd
From Reason's path, by Passion's lure betray'd,
Lament the sad result!" then down the steep
With new-born hope his mate the Mantuan led,
Where wide before my wond'ring eyes were spread
The horrid secrets of the boundless deep.

VI.

'Thence, Oh! what wailings from the abject throng
Around the starless sky incessant rung;
The short, shrill shriek, and long resounding groan,
The thick sob, panting through the cheerless air,
The lamentable strain of sad Despair,
And Blasphemy, with fierce relentless tone.

VII.

'Volleying around, the full, infernal choir,
Barbarian tongues, and plaints, and words of ire,
(With oft' between, the harsh-inflicted blow,)
In loud discordance from the tribes forlorn
Tumultuous rose, as in a whirlwind borne,
With execrations mix'd, and murmurs low.'

Inferno—the entrance into Hell: Canto 3. vol. i. p. 109–111.

I.

"Say, thou that droop'st beyond the sacred flood,"
The Holy Virgin thus her theme pursu'd,
But with a solemn brow, and piercing tone,
"Have I spoke truth? the sanction of thy voice
Must clear my charge and vindicate the Skies;
Thy innocence, or guilt must now be shown."

II.

'My faculties I felt so much confus'd,
My organs falter'd, as to speech disus'd,
Tho' oft I tried to answer to the charge;
A while she stood; then with indignant look,
She cry'd, "You have not drunk of Lethe's brook,
Your Mem'ry yet displays your deeds at large."

III.

'Slow from my lips the sad confession flow'd,
More to the Eye than Ear their movements show'd

My deep contrition for my early fault:
As when the bowman's hand o'erstrains the string,
Wide flies the flutt'ring shaft on languid wing;
Thus fail'd my words to paint my guilty thought.

IV.

'Deep groans and tears the pow'rs of speech suppress'd,
The deep concealment labour'd in my breast
Too big for utt'rance while she thus declaim'd:
"I wing'd thy soul to that empyreal Height,
Where the CHIEF GOOD, the Source of true Delight
Thy nascent Faith with Heav'nly hope inflam'd.

V.

"What deep Gulph, or insuperable Mound,
Cross'd thy plain path? declare what Magic bound
Thy falt'ring progress in CIRCÆAN chains;
What spell could bid the beam of Hope delay,
Before its light was lost in heav'nly day;
Why was her beamy torch illum'd in vain?

VI.

"What charms could those unreal Phantoms show,
Which fill yon deep nocturnal Vale of Woe
With orgies foul, or fix in torpid trance
The sleepy Soul, that you should leave the Streams
Of Life, to follow to the Land of Dreams
The fairy measures of their moonlight dance?"

VII.

'In bitterness of soul, I heav'd a sigh,
And with low voice essay'd a faint reply;
Scarce could my lab'ring lips the accents mould,
As with warm tears, I thus confess'd my fault:
"Their well-feign'd looks of Love my Fancy caught,
When you were summon'd to EMMANUEL's fold."

Purgatorio—the accusation of Dante by Beatrice.
Canto 31. vol. ii. p. 351–353.

XIII.

'As when the faculties, arous'd from sleep,
Of some wild dream the strong impression keep,
Till o'er the awful scene Oblivion holds
Her cloudy palm, and blots the vision fair,
Then gradual draws a veil of formless air,
Which soon each evanescent Shape enfolds,

XIV.

"Such was my feeling as the Vision fled,
A mingled thrilling sense of love and dread;

It vibrates in my heart, and burns my brain
Ev'n now; and oh! how quick it seem'd to go,
As to an APRIL Sun the drifted snow,
In vapours rising from the vernal plain.

XV.

'The pictur'd Series thus of times to come,
On leaves design'd, within her lonely room,
By SYBIL's hands, the wanton breeze destroys:
" O all-surpassing Source of raptures high,
One scintillation to my mind supply,
One glimpse, to shew the Source of heavenly joys!

XVI.

'O tune my tongue to that seraphic strain,
That bids the Image, duly press'd, remain
Upon the gen'ral Mind, and on my own!
That some faint trace, tho' by reflection view'd,
May give a Semblance of the SOV'REIGN GOOD
To the dark Souls confin'd beneath the Moon.

XVII.

'With Beam direct, I fac'd the vivid Light,
By Instinct led; for had I turn'd my sight
The least degree askance, the binding Beam
In sudden night had quench'd my visual powers;
But this I met with more collected force,
The noon-tide Glory in its fierce extreme.

XVIII.

'By uncreated energy refined,
Boldly I dar'd to scan the ETERNAL MIND:
O heavenly Grace, that thus benignant bore
A Mortal's daring eyes, that travell'd far
Amid thy wonders, till th' eternal Bar,
Uprais'd by Mercy, bade me look no more.'—

XXI.

'One moment of Oblivion swept away
More from the mind, on that distinguish'd day,
Than the whole course of Time's o'erbearing tide
Could drown, from the first dawn of op'ning Light,
Till then, when Neptune saw, with new delight,
Tall ARGO's shadow on his surges ride.

XXII.

'The splendid Scene, with strong attraction drew
My pow'rs, all centred in the glorious view,
And as I gaz'd, I kindled at the sight:
No Mortal from the glorious view could turn,
Tho' Worlds should dance, and Planets round him burn,
And ev'ry charm to lure his eyes unite.'

Paradiso—the Beatific Vision: Canto 33. vol. iii. p. 366-368.

ART. VI. *Alfonso, King of Castile.* A Tragedy, in five acts. By M. G. Lewis. Price 2s. 6d.

ALFONSO, king of Castile, had, many years previous to the supposed epoch of the play, left his minister and general, Orsino, to perish in prison, from a false accusation of treason. Cæsario, son to Orsino, (who by accident had liberated Amelrosa, daughter of Alfonso, from the Moors, and who is married to her, unknown to the father) becomes a great favourite with the King, and avails himself of the command of the armies with which he is intrusted, to gratify his revenge for his father's misfortunes, to forward his own ambitious views, and to lay a plot by which he may deprive Alfonso of his throne and his life. Marquis Guizman, poisoned by his wife Ottilia, in love with Cæsario, confesses to the King that the papers upon which the suspicion of Orsino's guilt was founded, were forged by him: and the King, learning from his daughter Amelrosa that Orsino is still alive, repairs to his retreat in the forest, is received with the most implacable hauteur and resentment, and in vain implores forgiveness of his injured minister. To the same forest, Cæsario, informed of the existence of his father, repairs; and reveals his intended plot against the King. Orsino, convinced of Alfonso's goodness to his subjects, though incapable of forgiving him for his unintentional injuries to himself, in vain dissuades his son from the conspiracy; and at last, ignorant of their marriage, acquaints Amelrosa with the plot formed by her husband against her father. Amelrosa, already poisoned by Ottilia, in vain attempts to prevent Cæsario from blowing up a mine laid under the royal palace; information of which she had received from Ottilia, stabbed by Cæsario to avoid her importunity. In the meantime the King had been removed from the place by Orsino, to his ancient retreat in the forest; the people rise against the usurper Cæsario; a battle takes place: Orsino stabs his own son, at the moment the King is in his son's power; falls down from the wounds he has received in battle, and dies in the usual dramatic style, repeating twenty-two hexameter verses. Mr. Lewis says in his preface,

'To the assertion, that my Play is *stupid*, I have nothing to object; if it be found so, even let it so be said: but if (as was most *falsely* asserted of Adelmorn) any anonymous writer should advance that this Tragedy is *immoral*, I expect him to prove his assertion by quoting the objectionable passages. This I demand as an act of *justice*.'

We confess ourselves to have been highly delighted with these symptoms of returning, or perhaps nascent purity in the mind of Mr. Lewis; a delight somewhat impaired, to be sure, at the

opening of the play, by the following explanation which Ottilia gives of her early rising.

'ACT I. SCENE I.—*The palace garden.—Day-break.*

'OTTILIA *enters in a night-dress: her hair flows dishevelled.*

'OTTIL. Dews of the morn, descend! Breathe summer gales,
My flush'd cheeks woo ye! Play, sweet wantons, play
'Mid my loose tresses, fan my panting breast,
Quench my blood's burning fever!—Vain, vain prayer!
Not Winter, thron'd 'midst Alpine snows, whose will
Can with one breath, one touch, congeal whole realms,
And blanch whole seas: not that fiend's self could ease
This heart, this gulph of flames, this purple kingdom,
Where passion rules and rages!'

Ottilia at last becomes quite furious, from the conviction that Cæsario has been sleeping with a second lady, called Estella; whereas, he has really been sleeping with a third lady, called Amelrosa. Passing across the stage, this gallant gentleman takes an opportunity of mentioning to the audience, that he has been passing his time very agreeably, meets Ottilia, quarrels, makes it up; and so end the first two or three scenes.

Mr. Lewis will excuse us for the liberty we take in commenting on a few passages in his play which appear to us rather exceptionable. The only information which Cæsario, imagining his father to have been dead for many years, receives of his existence, is in the following short speech of Melchior:

'MELCH. The Count San Lucar, long thought dead, but sav'd
It seems, by Amelrosa's care.—Time presses—
I must away; farewell.'

To this laconic, but important information, Cæsario makes no reply; but merely desires Melchior to meet him at one o'clock, under the Royal Tower, and for some other purposes.

In the few cases which have fallen under our observation, of fathers restored to life after a supposed death of twenty years, the parties concerned have, on the first information, appeared a little surprised, and generally asked a few questions; though we do not go the length of saying it is natural so to do. This same Cæsario (whose love of his father is a principal cause of his conspiracy against the King) begins criticising the old warrior, upon his first seeing him again, much as a virtuoso would criticise an ancient statue that wanted an arm or a leg.

'ORSINO *enters from the cave.*
CÆSARIO. Now by my life
A noble ruin!'

Amelrosa, who imagines her father to have banished her from his presence for *ever*, in the first transports of joy for pardon, obtained by earnest intercession, thus exclaims:

> 'Lend thy doves, dear Venus,
> That I may send them where Cæsario strays;
> And while he smooths their silver wings, and gives them
> For drink the honey of his lips, I'll bid them
> Coo in his ear, his Amelrosa's happy!

What judge of human feelings does not recognize, in these images of silver wings, doves, and honey, the genuine language of the passions?

If Mr. Lewis is really in earnest in pointing out the coincidence between his own dramatic sentiments, and the gospel of St. Matthew, such a reference (wide as we know this assertion to be) evinces a want of judgment, of which we did not think him capable. If it proceeded from irreligious levity, we pity the man who has bad taste enough not to prefer honest dullness to such paltry celebrity.

We beg leave to submit to Mr. Lewis, if Alfonso, considering the great interest he has in the decision, might not interfere a little in the long argument carried on between Cæsario and Orsino, upon the propriety of putting him to death. To have expressed any decisive opinion upon the subject, might perhaps have been incorrect; but a few gentle hints as to that side of the question to which he leaned, might be fairly allowed to be no very unnatural incident.

This tragedy delights in explosions. Alfonso's empire is destroyed by a blast of gunpowder, and restored by a clap of thunder. After the death of Cæsario, and a short exhortation to that purpose by Orsino, all the conspirators fall down in a thunder-clap, ask pardon of the King, and are forgiven. This mixture of physical and moral power is beautiful! How interesting a water-spout would appear among Mr. Lewis's Kings and Queens! We anxiously look forward, in his next tragedy, to a fall of snow three or four feet deep: or expect that the plot shall gradually unfold itself by means of a general thaw.

All is not so bad in this play. There is some strong painting, which shews, every now and then, the hand of a master. The agitation which Cæsario exhibits upon his first joining the conspirators in the cave, previous to the blowing up of the mine, and immediately after stabbing Ottilia, is very fine.

> 'CÆSARIO.
> 'Aye, shout, shout,
> And kneeling greet your blood-anointed king,
> This steel his sceptre! Tremble, dwarfs in guilt,

And own your master! Thou art proof, Henriquez,
'Gainst pity; I once saw thee stab in battle
A page who clasp'd thy knees: And Melchior there
Made quick work with a brother whom he hated.
But what did *I* this night! Hear, hear, and reverence!
There was a breast, on which my head had rested
A thousand times; a breast, which lov'd me fondly,
As heaven loves martyr'd saints; and yet this breast
I stabb'd, knaves, stabbed it to the heart! Wine! wine there!
For my soul's joyous!' P. 86.

The resistance which Amelrosa opposes to the firing of the mine, is well wrought out; and there is some good poetry scattered up and down the play, of which we should very willingly make extracts, if our limits would permit. The ill success which it has justly experienced, is owing, we have no doubt, to the want of nature in the characters, and of probability and good arrangement in the incidents: objections of some force.

ART. VII. *The History of England, from the Accession of King George the Third to the Conclusion of the Peace* 1783. By John Adolphus, Esq. F. S. A. 3 vol. 8vo. London. T. Cadell jun. & W. Davies.

IF the value of history is to be estimated from the instruction it affords to the statesman and politician, histories of recent events are certainly of greater importance than those of the transactions of distant ages. Every difference in manners, in civilization, and in government, increases the difficulty of making any application of the facts. It must be admitted, that a profound knowledge of the dynasties of Persia, or the constitution of Sparta, would afford but little assistance in the government of modern states; and the wisest statesman of the fifteenth century would now find the direction of affairs, even in the same country, a new and arduous undertaking. The progress of history is, however, extremely slow. The very excellence of some modern historians affords a convincing proof of this. Some of their most valuable materials, consisting of the memoirs and letters of the great actors in the scenes related, had remained unknown to the public for ages. It does not detract from the merit of these historians to state that their highest merit consists in concentrating the wisdom, the policy, the eloquence of former ages, and at the same time availing themselves of whatever light has been thrown upon them by the discussions of preceding writers. As but a small part of the documents which descend to posterity can be obtained by those who write within twenty or thirty years after the events they relate, it

would be unreasonable to exact the same excellence of execution, or extent of views, from the first compiler of the rude materials, as we expect from an author who may avail himself of all the faults and excellencies of a long train of persons who have preceded him. Many allowances are therefore to be made for the history of the period included in the work before us; and we have no hesitation in saying, that the fidelity and industry with which it has been executed entitle it to the attention of the public.

Mr. Adolphus, in his preface, states the views and sentiments with which he has composed this work. The praise of diligence and impartiality is that to which he chiefly aspires. He declares, that he is not of opinion that the views of different administrations have been directed to destroy the liberty or constitution of the country; that he will endeavour to rescue some conspicuous characters from calumnies, which have obtained some credit with the public from frequent repetition; and he expresses a hope, that a warm attachment to the constitution, which has ever been present to his mind, has not betrayed him into any indecent violence against those whom he has considered as its assailants. From the general tone of the preface, we were prepared to find a considerable bias in favour of the measures pursued by the successive administrations during the period to which this work extends. Though there are certainly some passages which are not free from this charge, we must at the same time give our author the praise of perfect impartiality, as far as we could discover, in narrating events, and selecting information. Careful references are made to the authorities on which he proceeds; and where the facts are related on the authority of private information, the reader is informed of that circumstance. We should hardly have thought it necessary to take particular notice of this, had we not seen instances of persons pretending to write histories, who disdain all reference to authorities, and seem to think themselves entitled to compose histories, like epic poems, by inspiration, and mere force of genius. Some of these writers have even had the effrontery to assume a tone of indignation, and complain, that after the profound investigations they assure their readers they have made, any person should presume to question their assertions. In writers of that description, we have found such gross misrepresentations and falsehoods, stated as facts, that the most charitable conclusion seems to be, that they have never consulted the authentic sources of information; as, if they have done so, they are certainly guilty of a greater fault than ignorance and presumption. Whatever temporary reputation they may acquire, by weaving together a tissue of party-pamphlets, it cannot be of long duration. They can be of no assistance to future inquirers,

who, though they may be desirous to acquire a knowledge of the statements of parties, will not take them at second hand. The partial accounts of a Burnet, a North, or a Ludlow, are useful to those who wish to form an estimate of the times; but the scurrility of a compiler must always be unworthy of attention. After submitting to the disagreeable drudgery of perusing some other accounts of the same period, we were still more strongly impressed with the general spirit of candour and fidelity which prevails in this work.

To the introduction of facts, upon the authority of private information, we do not object, where that is pointed out to the reader, as in the present work. It is, however, a source of information which we think ourselves entitled to regard with distrust. Few persons can make communications of any value, who have not had such a share in the transactions as will dispose them to be extremely partial; they incur no personal responsibility to the public; and the reader, who is ignorant of the persons concerned, is unable to estimate, as he might otherwise do, the influence which party connexions, or other causes, may have had on their statements. Even the author, who is in possession of these circumstances, will not always subject information, which he must receive with a certain degree of prepossession, (sometimes perhaps increased by the influence of superior birth or station), to the same scrutiny which he extends to information which he collects without incurring any obligation. There is perhaps less reason for the caution we have given, as it may be expected, that any defects which exist in these parts of the work, will provoke discussion, and eventually add to the stock of public information. The passages of this description, which will probably be most interesting to our readers, relate to Lord Bute's administration.

The following anecdote, with regard to the treaty of peace, which is calculated to convey a higher idea of his Lordship's talents than has been generally adopted, is stated on the authority of private information.

'The importance of the acquisitions made by the English East India company were fully appreciated by the Minister, and he was properly tenacious of their interests. At an early period of the negotiation he applied to the Court of Directors for instructions in settling the affairs of India.* Before the Court gave the required determination, the duke of Bedford signed the preliminaries; and an article contained in them relative to the Carnatic, appearing to Lord Bute subversive of the benefits to be expected from the successes of the British arms, he immediately informed the duke it was inadmissible. "Worn out," he said, "as we are, and loaded with debt, we must however continue the war, if that article is not altered." This reso-

*Smollett's complete History of England, vol. xvi. p. 290. *Author.*

lute remonstrance had the desired effect; the treaty was revised, and rendered agreeable to the East India company.* Vol. i. p. 249.

Our author does not appear to be acquainted with what we always understood to be the state of the fact. The blunder in the preliminaries was discovered at Paris by Mr. Pinto, a Portuguese Jew, author of a celebrated treatise on circulation and credit. He communicated it to the English ambassador, and afterwards received a pension of 600l. a year from the East India Company, for the important service he had done them.† Lord Bute does not appear entitled to any farther praise than that of supporting the duke of Bedford (who is said to have acted with laudable zeal and spirit) with all the stately and measured dignity of ministerial language.

In the appendix to the first volume, we have a correspondence which passed between Lord Bute and Bubb Dodington (afterwards Lord Melcombe). The character and intrigues of the latter are pretty well known, from the publication of his diary. He appears to have been one of Lord Bute's principal advisers, though he seldom goes farther than hinting his opinion, and even then qualifies it, if different from Lord Bute's, with the most ample apology. In one of his letters, after stating with due hesitation some doubts as to the propriety of continuing the war on the same footing, in case he had gone too far, he adds the following declaration:

'As you approve of the war, in what manner soever you carry it on, I shall never say one word more against it, public or private, but will support it whenever I am called on, as well as my distance from the scene of business will allow me. I told you I would do so (after having told you my opinion), when you did me the honour to command me to be your friend. Indeed, my dear Lord, I wish and mean to serve you, and am sure I will never disserve you, which is, I fear, as far as my poor abilities are likely to go. I am glad the King has given the seals; and, as you approve of it, I suppose they are well disposed of.' Vol. i. p. 550.

However amiable this system of passive obedience might be in the eyes of the Premier, it appears to have been accompanied with a very troublesome importunity in making requests, which occasionally obscured its merits. Lord Melcombe even went the length of writing a letter of remonstrance to Lord Bute (which is not published): and we have the following fragment of a homily in praise of himself, which Lord Bute composed on the occasion.

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* From private information. *Author.*

† Preface to a translation of Pinto on Circulation and Credit, by the Reverend S. Baggs. London, 1774.

'* * * In short, my Lord, though I cannot prevent umbrage being taken at my not satisfying every wish, I shall certainly hinder any reasonable ground of complaint concerning things I have once promised. I own, and without blushing, I have been very unfortunate in the means I have for years taken, of cementing friendships, and procuring attachments. Others, with much less trouble, perhaps without my sincerity, succeed better: but I repine not. Conscious of my own feelings, conscious of deserving better treatment, I shall go on though single and alone, to serve my king and country in the best manner my poor talents will allow me; happy, too happy, when the heavy burden that I bear shall be removed, and placed on other shoulders.' Vol. i. p. 551.

It can hardly be supposed that this languid declamation would contribute much to soothe the crafty politician to whom it was addressed. The letters written by Dodington are in the same style as that which we have quoted, and are additional proofs of the meanness and duplicity of his dissembling, artful, intriguing character. It is not unworthy of notice, how different an appearance a person may make to succeeding ages in his own prose, and in the laudatory strains of contemporary poetry. Who, after reading the following verses,—

'And thou, my youthful Muse's early friend,
'In whom the youthful graces all unite:
'*Pure light of mind*, and tenderness of heart,
'Genius and Wisdom: the gay social sense,
'By decency chastis'd; goodness and wit,
'In seldom-seeming harmony combin'd;
'*Unblemish'd honour*, and *an active zeal*
'For BRITAIN'S glory, LIBERTY, and MAN'—

would expect to find from the next line, that they were addressed by a poet of Thompson's genius and integrity, to a character as much distinguished for political profligacy as any which has been unmasked to posterity?

Our author afterwards enters into a discussion of the different motives assigned for Lord Bute's retreat from the management of public affairs. Without entering into the others, we lay before our readers what Mr. Adolphus considers as the real cause of his Lordship's resignation.

'In fact, the principal cause of his resignation was the want of support in the cabinet. In a private letter to one of his friends, before he retired from the helm, he more fully explained the real motives of his conduct: "Single," he said, "in a cabinet of my own forming; no aid in the House of Lords to support me except two peers, (Lords Denbigh and Pomfret); both the secretaries of state silent, and the Lord Chief Justice, whom I myself brought into office, voting for me, yet speaking against me; the ground I tread upon is so hollow, that

I am afraid not only of falling myself, but of involving my Royal Master in my ruin.—It is time for me to retire!"* Vol. i. p. 126.

Whatever doubt may still remain as to the immediate causes of Lord Bute's departure from office, the general features of his character ought now to be pretty well known. Possessed of talents and acquisitions which might have made a respectable appearance in an inferior situation, an uncommon share of pride and presumption, united to good intentions, made him aspire to the glory of being a great and virtuous minister: and, that no person might share his renown, he wisely determined to keep those at a distance, whose reputation might come in competition with his own. On these principles, instead of availing himself of the advice and assistance of men of talents and integrity, nothing but the most implicit submission could make any impression upon him. It appears from this letter, that he had brought himself into a situation in which no men would act in support of his measures, but those who were either so devoid of talents, as not to see the defects of his administration, or so pliable and destitute of principle, as to be indifferent about them. Men of a different stamp, who were attached to the Sovereign, might conceive it their duty to acquiesce, but they never could be expected to make any exertions. In one part of the letter quoted, there seems to be some inaccuracy. The Chief Justice, whom, Lord Bute says, '*I myself* brought into office,' was appointed in the year 1756, four years before the late king's death, when, it is believed, Lord Bute had not influence enough to procure the appointment of an excise-officer. He could not be the person meant; and though we cannot pretend to say what is the nature of the mistake, it is not improbable that Lord Bute might talk of the Chancellor in that manner, as Dodington† details a conversation in which Lord Bute says that Henley owed his being made chancellor, from keeper, entirely to him; and his worthy confidant advises him to keep his letter and others '*properly labelled* and tied up,' for *the ingratitude of mankind* might make it necessary to preserve them.

Though our author is inclined to place Lord Bute's character in a higher point of view than we are disposed to do, he is by no means blind to his defects. He observes,

'Even the virtues of Lord Bute were not calculated to insure respect, or conciliate affection. It is said of him, "No man could complain, during his administration, of a promise broken, or of hopes given, and not fulfilled. No inferior person, in any department where he had

* From private information. *Author.*

† Dodington's Diary, p. 428.

served, who did not passionately regret the loss of so easy, so kind a superior."* In diminution of this eulogium, it is to be remarked, that Lord Bute made no promises, and gave no hopes, except to persons whose devotion he meant to secure; and that, under him, the pernicious precedent was introduced, of removing every dependent of government, even to the lowest clerks in the public offices, to introduce others of his own nomination.† This proceeding necessarily created many enemies; and if it gave him some claims to gratitude, those claims were too slight and precariously founded to be much relied on.' Vol. i. p. 127-28.

We agree with our author in rejecting the vulgar and rancorous abuse which has been bestowed on Lord Bute. As to the secret and mysterious influence which he was supposed to retain for a long period after his resignation, Mr. Adolphus observes, that, with the exception of the ministerial changes which took place soon after his resignation, no report was ever less consonant to truth; and he adds, on the authority of private information, which in this instance we are inclined to believe—

'It was his constant and repeated complaint to his intimate friends, both in his travels and at home, that he was neglected by his Sovereign. This avowal, from a man so cautious as Lord Bute, outweighs all the vague assertions of those who maintained the existence of a mysterious agency; and proves that the loss of his influence had sunk deep in his mind.‡ Vol. i. p. 127.

Where our author ventures on remarks of a general nature, we do not observe the same good sense and judgment which is shewn in the selection of materials. It must, however, be admitted, that he does not very often offend in this respect. In a review of the affairs of Europe, in the years 1767-8, he takes that opportunity of entering into a detail of the downfal of the jesuits, which he attributes, in a great measure, to an attachment in the duke de Choiseul to the systems of free-thinking philosophers. The narrative of the final suppression of the order concludes with the following reflections:

'Although, by a resolute exertion of the civil powers, this formidable society was thus reduced, there is great reason to doubt that the strength of the European governments was augmented by their fall. If they were really guilty of dangerous and treasonable designs, sufficient means were not wanting, especially in arbitrary monarchies, to punish the guilty, and disperse their adherents. Even the whole

* Letter from a Gentleman in Town to his Friend in the Country, p. 11. *Author.*

† Serious Considerations on the Measures of the present Administration, by Dr. Butler, bishop of Hereford, p. 10. The same fact is asserted in innumerable other publications. *Author.*

‡ From private information. *Author.*

order might have been reformed, their wealth diminished, their power abridged, and their numbers reduced. But the destruction of a society which included so much learning and ability, and respectable from connexions, and able publications in literature and theology, diminished the general credit of the established religion, and gave new spirit to those who already meditated the destruction both of Christianity and monarchy.' Vol. i. p. 338.

We have before heard the idea, that many events which afterwards happened, would not have taken place, if the Jesuits had not been suppressed; and that it was one of the causes of the subsequent convulsions of Europe. This is so completely contradicted, however, by the state of depression, both in talents and activity which the society had reached before that period, that we were astonished to find so childish a notion countenanced by a person of any information. The jesuits were first expelled from France, in 1594, (though afterwards re-established); from Venice, in 1606; from England, in 1604. Was all that done by free-thinking philosophers? The ablest work that was ever published against them, or indeed in any controversy whatever, and which was the chief cause of the odium and contempt into which they afterwards fell, was certainly the work of one of the most religious men that ever existed.* Whatever share the French *philosophers* had in the suppression of that society, their object was to acquire popularity, by supporting a measure which had been wished for by the Parliaments, and a great proportion of the people, for more than a century. The king of Prussia seems to have been fully as much of a free-thinking philosopher as the duke de Choiseul; and yet he appears to have been the only person who took the part of the Jesuits. If the general credit of the established religion was diminished by the abolition of the Jesuits, in how degraded a state must religion be in those countries in which the reformed religion is adopted, where no religious orders are established? In fact, the odium attached to the order, their intrigues, and the bad tendency of many of their writings, did more harm to the cause of religion, than their declining vigour and talents could have done service; and, if they had subsisted to the year 1792, any unavailing efforts they might have made, would only have furnished pretences for the barbarities that were practised: though, if coincidence of opinion would have been any protection, they appear, in their ideas both of government and morality, to have resembled, in many respects, the wildest projectors who disorganized France.

In another respect, our author's ideas do not appear to us much more profound. He seems to think, that even after Lord

* Pascal Lettres Provinciales.

Cornwallis's surrender, the independence of America was doubtful; and states, on the authority of Sir Henry Clinton, that the conquest of that country might have been secured by a reinforcement of 10,000 men.

'The resources of America were exhausted; the long interruption of commerce produced a lamentable want of all necessaries; a want felt from the highest to the lowest classes throughout the colonies. No art or coercion could give circulation to the paper currency; and not only the friends of Great Britain, but the warmest adherents of America, considered the maintenance of the army for another year, and still more the establishment of independency, as utterly impossible, and hardly desirable.* Sir Henry Clinton himself, after the surrender of Lord Cornwallis, forwarded an assurance to administration, that with a reinforcement of ten thousand men only, he would be responsible for the conquest of America.† But before this offer could be made, the ministry, who alone could be expected to give it effect, were shaken; a new system was adopted; active hostilities were no more to be pursued; and Sir Henry Clinton being allowed to retire, was replaced by Sir Guy Carlton.' Vol. iii. p. 507-8.

—We beg Mr. Adolphus would just consider, whether there is any one year of the American war, in which this might not have been said with equal plausibility.

The length to which our criticisms have already extended, oblige us to abridge any further remarks we meant to offer. Though the execution of this work is upon the whole good, the conduct of the narrative is in some respects defective. The facts are not always stated in a connected or comprehensive manner, or brought forward according to their relative importance. This appears particularly in the statement of political arrangements, and in the detail of military matters, though more in the former than in the latter. The language is in general perspicuous, though not always correct. In many instances it is deficient in simplicity; and our author seems more desirous of enriching his style with a redundancy of words, than by nervous simplicity of language, or strength of ideas. The characters appear fairly drawn, though they chiefly consist of the most brilliant and favourable features of each character. It must be confessed, that they are not so interesting as they would be, if they had their due proportion of shade. We are, however, far from blaming Mr. Adolphus on this account. It is more prudent, perhaps, for a contemporary to leave the province of bestowing blame to posterity, and to rest contented with stating facts, and mentioning the most eminent personal qualities of the different characters

* See intercepted Letters of Silas Deane, Remembrancer. Vol. xiii. p. 71. *Author.*

† From private information. *Author.*

who appear on the scene described. We agree with Tacitus,† that even flattery and adulation is less apt to mislead, than satire and abuse; as the reader is fully on his guard against the meanness of the one, but may be so far deceived as to believe that the other proceeds from a bold and indignant spirit of independence. We do not mean to accuse Mr. Adolphus of falling into the other extreme, and we think he has adopted the safest course, in avoiding that which was most likely to flatter the vanity of a writer.

As our readers will be desirous of judging of his style for themselves, we select the two following characters out of a number of others, as those which appear to be written with most care.

'William, earl of Mansfield, Lord Chief Justice of the King's Bench, had long maintained an unrivalled reputation as a lawyer, and an exalted character as a statesman. He was perfectly acquainted with the history and constitution of England, versed in the practice of its laws, and enlightened by all the information necessary to form a comparison and connexion between them and the best of ancient and modern systems. He obtained a seat in the House of Commons in the year 1742, when he was in his thirty-eighth year, his faculties no less matured by experience than improved by study. He commenced his parliamentary career as a supporter of Lord Bath's administration, which was vehemently opposed by Mr. Pitt, and his eloquence was no less celebrated in the senate than at the bar. His language was natural yet elegant, arranged with method, and applied with the utmost ingenuity; his images were often bold, always just; his eloquence flowing, perspicuous, convincing and impressive. He was endowed with a most retentive memory, which rendered his replies irrisitible, from the facility of repelling the arguments of his adversaries, and exposing their fallacy, weakness, or absurdity. He affected no sallies of imagination, or bursts of passion, but made his appeal rather to the reason than the feelings, and did not even, when attacked, condescend to personal abuse, or petulant altercation. His speeches were characterized by acuteness, and recommended by clearness and candour; his reasoning introducing itself so easily into the minds of his hearers, as to convey information and conviction; occasionally forming a continual chain; and sometimes separated into regular divisions. His manner was moderate and decent, not presuming and dictatorial; but expressive of that dignity which, arising from superiority, does not produce disgust. Though of low stature, his person was remarkable for ease and grace; he possessed a piercing eye, a voice finely toned; his action was at once elegant and dignified, and his countenance replete with fire and vivacity. He supported through life the utmost consistency of political conduct, never courting popular applause, so much as the approbation of the

† Ambitionem scriptoris facile adverseris: obtrectatio et livor pronis auribus accipiuntur. Quippe adulationi fœdum crimen servitutis, malignitati falsa species libertatis inest. Tacit. lib. i. Histor.

wise and good; yet not intimidated by the appearance of danger, or the fury of party, from pursuing that conduct, or enforcing those sentiments, which were dictated by his own conviction. Too mild to be the leader, too wise to be the dupe of any party, he was believed to speak his own sense of public measures. The House of Lords paid greater deference to his authority, than to that of any other individual; and he was frequently consulted by the King. The perspicacious eye of envy and jealousy could not establish a fault in his political conduct;* and malignity was reduced to the miserable resource of extorting from his descent the means of direct implication, imputing to him those attachments and principles by which his relatives were influenced; but which he had not, in his juridical or senatorial capacity, ever adopted. Lord Mansfield was a conspicuous and constant supporter of administration in the American contest: in the year 1766, he had delivered his opinions on the subject of British authority, and American resistance, in the house of Lords;† and the judgment he then professed, appears always to have swayed him in every subsequent crisis.‡ Vol. ii. p. 182-4.

'Fox displayed at Eton and at Oxford an ardent attachment to classical literature, and gave presage of his future genius, by unwearied application to Cicero and Demosthenes, and by preferring the Athenian to the Roman orator. Even in the earliest periods of life, and during all the vicissitudes of pleasure and dissipation, he was indefatigable in the exercise of his argumentative faculty. The indulgent partiality of his father supplied abundant means of gratifying inclinations natural to a youth of warm passions, totally exempt from restraint; and his great talents were shrouded from the view of those who could not discern them through the veil of unbounded dissipation. He obtained a seat in parliament before the period of legal maturity, and was, in 1770, appointed a Lord of the Admiralty: but his support, though marked with all the ardour of his temper, and energy of his genius, was not yet deemed essential to the cause of government: he had more than once participated in the unpopularity of administration, without the credit of sharing the

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* He was severely attacked by Wilkes, Junius, Andrew Stewart, and others; but even when party rage was highest, their efforts produced only a clamour of the populace; men of sound judgment in every rank, and of all parties, have since concurred in acknowledging the futility of the accusations. *Author.*

† "Proceed then, my Lords," he said, "with spirit and firmness, "and when you shall have established your authority, it will then be "time to shew your lenity." See Holliday's Life of Lord Mansfield. *Author.*

‡ This delineation is derived from the characters of Lord Mansfield, by Bishop Newton, Dr. Johnson, Bishop of Worcester, and various other authorities collected from Holliday's Life of Lord Mansfield, p. 456, et seq. and from private information. *Author.*

direction of their measures. In 1772, he resigned his situation at the Admiralty with marks of disgust, and was then expected to join the ranks of opposition.* The difference was, however, accommodated; and he soon afterwards† received a seat at the Treasury Board, from which he was dismissed in March 1774, with circumstances which occasioned the most lively indignation. To the period of his quitting the side of the minister, Mr. Fox was considered, by some as a man for whose political errors, and levity of conduct, youth and inexperience afforded charitable excuses:‡ "but he soon discovered powers for regular debate, which neither his friends had hoped, nor his enemies dreaded."§ The force of Fox's oratory cannot be adequately described, and can be felt only by those who have heard him on important occasions. His speeches were luminous, without the appearance of concerted arrangement; his mind seemed by its masterly force, to have compressed, reduced, and disposed the whole subject, with a confident superiority, to systematic rule; the torrent of his eloquence increased in force, as the subject expanded; the vehemence of his manner was always supported by expressions of correspondent energy; and the decisive terms in which he delivered his opinions, by precluding the possibility of evasion, impressed a full conviction of his sincerity, and gained regard even from the most inveterate opponent. The distinguishing characteristic of his arguments was profoundness; his general aim was the establishment of some grand principle, to which all the other parts of his speech were subservient; and his genius for reply was singularly happy. He not only combated the principal reasonings of his adversaries, but extending a generous protection to his own partizans, rescued their speeches from ridicule or misrepresentation. The boldest conceptions, and most decided principles, uttered by him, did not appear gigantic: he seldom employed exaggerated or tumid phraseology, and in the greatest warmth of political contest, few expressions escaped him, which can be cited to the disadvantage of his character as a gentleman. Rhetorical embellishments, though frequently found in his harangues, did not seem the produce of laborious cultivation, but spontaneous effusions. Superior to art, Fox seemed to illustrate rules which perhaps he had not in contemplation; and the bold originality of his thoughts and expressions would rather entitle him to be considered the founder of a new style of eloquence, than a servile adherent to any established practice. Burke, studious and indefatigable, from his continually augmenting stores, poured knowledge into the mind of Fox: but in debate their manners were widely dissimilar. Fox depended on his natural and daily improving genius for argumentation: Burke on those beauties which his taste

* See Gibbon's Posthumous Works, vol. i. p. 449. *Author.*

† 9th January, 1773. *Author.*

‡ See Debates on Mr. Grenville's Act, 25th February, 1774. *Author.*

§ The expression of Gibbon.—See Posthumous Works, vol. i. p. 489. *Author.*

and learning enabled him to collect and dispose with so much grace and facility: his speeches were listened to with admiration, as elegant pleadings; but Fox was always elevated above his subject; and by energy of manner, and impetuosity of oratory, staggered the impartial, animated his adherents, and threw uneasiness, alarm, and astonishment, into the minds of his opponents. Vol. ii. p. 194–7.

One of the most important parts of the work, is the account given of the debates in Parliament. It is executed with judgment and industry; and the eloquent extracts from some of the speeches add very much to the value of the work.

We have already had occasion to praise the labour and industry which has been shewn by Mr. Adolphus in the book before us. It must, however, be observed, that there are some departments in which it appears defective, particularly in what relates to finance, to the internal government of the country, and the other details of legislation. The mere events of a campaign give but an imperfect idea of the state and strength of contending powers. In modern nations, more particularly in England, the state of public credit; the operations of budget; the means of supplying the armies; the effect of the different systems adopted in war and peace, upon trade and commerce; are all of the highest importance. Though our author gives a very full account of political events, he is very sparing of information upon these subjects, even of the military force employed by the contending powers. Much valuable information might be collected from the reports made to Parliament and other sources. With the assistance of tables it might be detailed, without adding much to the size of the book; and without further information on that subject, a history of England, especially during that period, must be very imperfect.

Our author intimates his intention of bringing his history further down. The further he goes, he will find a greater want of materials; and we will venture to predict, that, if he perseveres, his work, in the course of a few years, will be of little value. It would give us pleasure to hear, that Mr. Adolphus's industry and judgment were employed in completing a history of George the I. and II. where we conceive there is a much better field for his exertions. Many important materials are already known to the public, which would add greatly to the interest of his work; and we are confident, that valuable additions might be made to them. The events are certainly sufficiently interesting; and a comprehensive, accurate, and candid account of them is much wanted.

On the whole, we have no hesitation in recommending the volumes before us to the public, as an useful and interesting work. The future historian will not perhaps consult it for profound re-

marks or extensive views: He will, however, recur to it as a valuable magazine of facts, which will tend much to diminish the labour of his investigation.

ART. VIII. *Voyage dans la Basse et la Haute Egypte, pendant les Campagnes du General Bonaparte.* Par Vivant Denon. Paris. Didot. 2 tom. Folio. 1802.

FEW publications, we believe, have ever obtained so extensive a circulation in the same space of time as these travels. The country to which they relate stands at the beginning of sacred and profane antiquity; the splendid periods of its history were all gone by, before the barbarians of Europe had learned either to observe or record; and the monuments that employed the pencil of M. Denon, had assumed the appearance of deserted ruins in the days of Strabo and Diodorus.

Since the origin of correct observation and minute inquiry in modern Europe, the political situation of Egypt has been such as to place all our travellers in circumstances of great disadvantage. Exposed to continual insult and suspicion on account of their religion and their curiosity, they have been obliged to pursue their researches amidst a nation of bigots and banditti, and to snatch a hasty and imperfect view of objects that require the most deliberate meditation. It is not easy for an infidel and an alien to travel at all among a people without police, and without morals; and the fruits of his hasty and perilous expeditions, cannot often be very valuable, where his informers are equally destitute of knowledge and veracity.

At length, however, a civilized nation possessed itself of this wonderful country; a whole college of philosophers was transported to the city of the Ptolemies; a printing-press was established at Cairo; and the scholars of Europe consoled themselves for the violation of the balance of power, by anticipating the sublime discoveries of the Egyptian institute. The appearance of some scattered memoirs served only to exalt these expectations; and at last the present superb publication was announced, under the patronage of the Chief Consul, and at a price that could only be justified by the combination of splendour and utility.

The book is certainly sufficiently splendid; and yet it has disappointed us extremely. The author writes like a brisk little old Frenchman, with more vivacity than judgment, and more ease than perspicuity. His narrative is exceedingly perplexed, from the want of dates and the irregularity of his military movements; and the reader must be contented to take his skill in drawing as

an apology for his defects in erudition, and his admitted ignorance in all the branches of physical science. As to his *opportunities*, there is no doubt that he talks of them very magnificently in the outset of his expedition.

'I was going to break up, as it were, a new country; to be the first to see, and to see without prejudice; to make researches in a part of the earth hitherto covered with the veil of mystery, and for two thousand years shut out from the curiosity of Europeans. From the time of Herodotus to the present, every traveller, following the steps of his predecessor, had only rapidly ascended the Nile, not daring to lose sight of his boat; and only quitting the shore for a few hours to hurry a few hundred yards off, and visit, with anxiety, the nearest objects. For every thing beyond the vicinity of the river, the oriental histories alone have been consulted.' Vol. i. p. 360–361.*

The truth is, that, beyond the vicinity of the river, there is nothing to be seen; but our author himself was not long in discovering, that the advantage of being guarded by the division of an army might be more than compensated by the imperious necessity of marching and halting along with it; and by the perils to which he was exposed, by the hostility which the invasion of his countrymen had excited among the natives. The following passage is altogether in the French taste:—

'Here the pitiless reader, sitting quietly at his table with his map before him, will say to the poor, hungry, harassed traveller, exposed to all the trouble of war: "I see no account of Aphroditopolis:" Crocodilopolis, Ptolemais—what is become of all these towns?—What had you to do there, if you could not give any account of them? Had you not a horse to carry you, an army to protect you, and an interpreter to answer all your questions, and have not I relied upon you to give me some information on all these subjects? But, kind reader, please to recollect, that we are surrounded with Arabs and Mamelukes, and that, in all probability, I should be made prisoner, pillaged, *and very likely killed, if I had thought proper to venture only a hundred paces from the column* to fetch some of the bricks of Aphroditopolis. The embanked quay which I saw in galloping to Minchia, was Ptolemais; and no other remains of this town exist.' Vol. ii. p. 22, 23.

This does not happen to be very correctly true; because Pocoke observed various pedestals, cornices, and other ruins of granite in the same place; though it may easily be supposed that they escaped the notice of a galloping philosopher. In fact, the harassing service upon which the detachment of the army that ascended the Nile was employed, and the rapid marches and countermarches it was obliged to perform, made the opportunities of an

* We quote from the translation of Dr. Aikin.

artist extremely precarious; and the universal detestation in which the invaders were held by the natives, rendered the condition of a straggler a thousand times more hazardous than that of those solitary but pacific travellers, whose condition our author is pleased so frequently to commiserate. From this circumstance it has happened, that many of the splendid objects which other European travellers have described did not fall under the observation of M. Denon. He did not visit Arsinoe, for instance, nor Antinopolis, Hypsele, nor Abydos. The fine ruins of Ombos, which are delineated both by Pocoke and Norden, he only sketched as the flotilla carried him past them on the river; and twice passed through Thebes at the gallop, after being imprisoned for two months among the rubbish of Zaoyeh and Girgeh.

Though we cannot consider this book, therefore, as having made any very important addition to our knowledge of the Egyptian history of monuments, it would be unfair to allege that it is destitute of interest or information. It contains many beautiful engravings, and many striking and animated specimens of description: it gives us, incidentally, at the same time, a great number of curious traits of the character of the inhabitants, and certainly affords the most candid and authentic detail of the situation and conduct of the French army, during the progress of their Egyptian conquest, that has yet been presented to the public. In endeavouring to lay before our readers a short abstract of what is most valuable in its contents, we shall separate the author's observations, as an artist and a student of antiquity, from his narrative as a sharer in this memorable expedition, and an observer of manners and events, that cannot fail to interest by their novelty or importance. The history of his adventures as a soldier and a Frenchman will naturally go before the slight sketch we shall be able to give of his observations on the antiquities of the country.

The republican army sailed, it is well known, for the generous purpose of redressing grievances; and had nothing farther in view than the deliverance of the Egyptian innocents from the oppressions of their Mameluke governors. It is also pretty generally known, that their exertions were repaid with the most signal ingratitude; and that this perverse generation persisted in rejecting their offers of fraternity with the most unaccountable animosity; they even fabricated calumnies against their heroic deliverers, and circulated stories of their outrages and injustice, that found credit with the ill-informed or malignant. In the meantime, however, the crusaders said little for themselves: we heard, indeed, of their victories and proclamations, but could learn nothing of their treatment of the conquered people, or of the progress of their Coptic disciples in civilization and morality. The

work of M. Denon presents us with much of this valuable information; and the most interesting passages in his narrative are probably those which contain the most characteristic traits of the dispositions and demeanour of his companions.

The voyage from Europe need not detain us very long; though there is something so characteristic, both of the man and of the nation, in our author's remarks on the capture of Malta, that we must extract two sentences. When the surrender was announced, he breaks out into an encomium on the gallantry and ancient splendour of the Knights of Jerusalem; and adds—

'When I figured to myself this accumulating glory, acquired and preserved during several ages, melt away when opposed to the fortune of Bonaparte, I thought I heard the ghosts of Lisle-Adam and Lavallette vent their dismal lamentations, and I fancied I saw Time make to Philosophy the illustrious sacrifice of the most venerable of all illusions.' Vol. i. pp. 53, 54.

At a supper given to the Maltese Captains, he observes:—

'They saw, with equal surprise and admiration, the martial elegance of our generals, and the assemblage of officers, on whose countenances beamed health and vigour, glory and hope. They were struck by the noble physiognomy of the commander in chief, the expression of which seemed to augment his stature.' Vol. i. p. 59.

This is only absurd; but, in the following page, we read with sentiments of more serious reprobation—

'The more respectible inhabitants, not yet recovered from their astonishment at the events which had taken place, kept themselves within doors; while our soldiers, *heated by wine and by the climate*, inspired so much terror among the trades people, and the lower classes, that they shut up their shops and hid their females,' Vol. i. p. 60.

The critical escape of the French armament from the fleet of Lord Nelson is sufficiently known; but it is not perhaps very generally understood, how easy and how complete our victory would then have been. Two days after our fleet had sailed from Alexandria, Bonaparte appeared before that port, and M. Denon says, 'it blew a fresh gale; and the convoy was blended with the fleet in such confusion, that the most terrible defeat would have ensued if the enemy had appeared. The soldiers, however, were landed, and appear to have experienced a pretty vigorous resistance, as our author very coolly observes, 'that they were under the necessity of putting *the whole of their adversaries* to death at the breach.' The greater part of the troops were marched off the very moment they were landed; and, in passing through the desert that extends from Alexandria to Rhamania, experienced, for the first time, that optical deception

which makes the burning surface of the sand assume the appearance of a lake of water. This appearance the French have denominated *mirage;* and the nature of it is thus explained by M. Denon—

'It is an illusion produced by the *mirage* of salient objects on the oblique rays of the sun, refracted by the heat of the burning soil.' Vol. i. p. 122.

This explanation is, no doubt, completely satisfactory; though it is rather a new notion, we believe, that the rays of the sun can be *refracted by heat*. The Mamelukes made their first attack on the invaders at the village of Embaby, and were repulsed with considerable loss. Our author breaks out, upon this occasion, into the following rapture:

'In the midst of this carnage, the sublime contrast, which, on looking upwards, was afforded by the clear sky of this fine climate, was very striking. A handful of French, led by a hero, had just subdued a quarter of the globe; an empire had just changed its ruler; and the pride of the Mamelukes had been completely humbled by the bayonets of our infantry. During this great and terrible scene, the result of which was to become so important, the dust and smoke scarcely obscured the lower part of the atmosphere. The morning star, revolving over a spacious horizon, peaceably terminated its career—a sublime testimony of that immutable order of nature, which obeys the decrees of the Eternal, in the calm stillness that renders it still more awful.' Vol. i. pp. 129, 130.

M. Denon next proceeds to Rosetta with General Menou; and the only exploit performed in that quarter seems to have been the burning and fusilading of a defenceless village, in consequence of some vague information, that a few straggling Frenchmen had been put to death by some of its inhabitants. After this, it is added, that some of the surviving fugitives 'came and presented all the fowls and geese they had to the soldiers, *who put a period to the remorse* by which they had been tormented for three weeks before.' From the shores of Rosetta, M. Denon was a witness of the memorable engagement of Aboukir; and describes, in a very picturesque manner, the awful spectacle of the night combat. It was not till four days after the battle that the result of it was known in that quarter. A considerable time after this, the author, having occasion to go to Alexandria, passed by the scene of this terrible action. The following passage is in a better style than any we have yet extracted.

'We reached the sea-side at midnight, when the rising moon lighted up a new scene. The shore, to the extent of four leagues, was covered by wrecks, which enabled us to form an estimate of the loss we had sustained at the battle of Aboukir. To procure a few nails, or a few iron hoops, the wandering Arabs were employed in burning on the

beach the masts, gun carriages, boats, &c. which had been constructed at so vast an expence in our ports, and even the wrecks of which were a treasure in a country where so few of these objects were to be found. The robbers fled at our approach; and nothing was left but the bodies of the wretched victims, drifted on the loose sand, by which they were half covered, and exhibiting there a spectacle as sublime as terrific. The sight of these distressing objects plunged my soul, by degrees, in a deep melancholy. I endeavoured to shun these terrifying spectres, but in vain: all those that came across me attracted my attention by their various attitudes, and made different impressions on my mind. But a few months before, young, replete with health, courage, and hope, they had, by a noble effort, torn themselves from the embraces of their weeping mothers, sisters, and wives, and from the feeble struggles of their tender infants. All those by whom they were cherished, said I to myself, and who, yielding to their ardour had allowed them to depart, are still offering up prayers for their success, and for their safe return: waiting with avidity the news of their triumphs, they are preparing feasts for them, and counting the moments as they pass, while the objects of their expectation lie on a distant beach, parched up by a burning sand, and having their skulls already bleached.' Vol. i. pp. 180, 182.

From Rosetta, M Denon set out with a party of savans upon an excursion into the Delta; but, after creeping a little way along among filthy and obscure villages, they were attacked by the natives, in a disorderly manner; and scampered back, very much terrified, to head-quarters. He then sails up the Nile to Cairo, without giving any description of his route—visits the pyramids, and is besieged in the quarter of the Institute, during a very alarming insurrection that took place in the city. The cause and the consequences of this disaster M. Denon explains in this manner:

'The timid and indolent Egyptians had smiled with satisfaction at the expulsion of their oppressors, who had harassed them with numberless vexations and acts of injustice: but when they were called on to pay their deliverers, *they soon began to regret their former tyrants:* and, on recovering from their first panic, they had listened to their mufti, who found means to animate them against us with a fanatic enthusiasm, and they had conspired in silence. For our own security we ought, perhaps, to have spared none who had seen French soldiers retire discomforted; but our clemency anticipated their repentance; and thus the desire of revenge in our enemies was not extinguished by their consternation, which I could read the next day in the attitude and countenance of the malecontents; and I was convinced, that if, before the day of this engagement, we had been encompassed by a circle of Arabs, we were now confined within narrower limits, and should always be obliged to march through domestic foes.' Vol. i. pp. 289, 290.

To secure themselves as much as possible against these misfortunes, General Dumas 'made a great carnage of the rebels;' and

guns were placed in such a manner as to command the chief avenues of the city.

Murad-Bey, the great leader of the Mamelukes, had retired to Upper Egypt, after his discomfiture at Embaby; and General Desaix was now despatched with a force of 7000 infantry and 1200 cavalry to pursue him, and reduce that country to subjection. M. Denon, whose principal object was the delineation of the superb monuments in that region, was attached to this division, and set out along with it in the beginning of August 1799. The day after his arrival at head quarters, a column of 300 men was sent out to raise a requisition of buffaloes and horses, over and above the ancient *miri*, or land-tax: and this oppressive conduct is justified by the example of the Mamelukes, and by a sentence from Diodorus, purporting, that it was always necessary to beat an Egyptian, in order to get any thing from him!—On the 26th of August, the French and Mameluke armies approached each other in the neighbourhood of Sedinam, and engaged in the severest conflict that seems to have taken place in the course of the whole expedition. The following description is probably a little exaggerated, but it is animated, at least, and extraordinary.

'At the first dawn of day we formed in a hollow square battalion, with two platoons on our flanks. Soon after we saw Murad-Bey at the head of his formidable Mamelukes, and eight or ten thousand Arabs advancing to us, covering a league of the plain. A valley separated the two armies, which we had to cross to reach our enemies. We were hardly got to this unfavourable position, when the enemy surround us on all sides, and charge us with an intripidity approaching to fury: our close files render their numbers useless; our musketry keep up a steady fire, and repel their first attack; they halt, fall back, as if retiring from the field, and suddenly fall upon one of our platoons, and overwhelm it: all who are not killed, immediately throw themselves on the ground, and this movement uncovers the enemy to our grand square; then we take advantage of it, and pour in our fire, which again makes them halt and fall back. All that remain of the platoon enter the ranks, and we collect the wounded. We are again attacked in mass, not with the cries of victory, but of rage: the courage is equal on both sides: they are animated by hope, we by indignation: our musket barrels are cut with their sabres; their horses fall against our files, which receive the shock unshaken; the horses are startled at our bayonets; and their riders turn their heads, and back them upon us, to open our ranks by their kicks: our people, who knew that their safety consisted in remaining united, press on without disorder, and attack without breaking their ranks: carnage is on all sides; but each party fight without mixing with the other. At last, the fruitless attempts of the Mamelukes urge them to a madness of rage; they throw at us their arms, which otherwise could not reach us; and, as if this were to be their last battle, they shower upon us their guns, pistols, hatchets, and the

ground is strewed with arms of all kinds. Those who are dismounted drag themselves under our bayonets, and cut at our soldiers' legs with their sabres: the dying man summons his last effort to throttle his adversary. One of our men lying on the ground, was seizing an expiring Mameluke, and strangling him:" an officer said to him, "How can you, in your condition, do such an act?" "You speak much at your ease," the man replied, "you who are unhurt; but I, who have not long to live, must have some enjoyment while I may." Vol. i. pp. 333-6.

This M. Denon calls a great victory; but from his own account it appears rather to have been a great escape, since the enemy was not pursued in his retreat, and since Desaix found himself under the necessity of returning to Cairo immediately after, for reinforcements. Upon resuming his march, he advanced from Faium to Benesuef; and from that station by Hermopolis to Siut, levying contributions according to the prescription of Diodorus, and using every exertion to come up with the fugitive and indefatigable enemy. From Siut, however, the column was again forced to advance; and—

'After marching thirteen hours, we came in the evening to Gamerissiem, unfortunately for this village; for the cries of the women soon convinced us that our soldiers, profiting by the darkness of the night, under pretence of seeking provisions, and notwithstanding their weariness, were enjoying, by violence, the gratifications which the place offered them. The inhabitants, pillaged, dishonoured, and urged to desperation, fell upon the patroles whom we sent to defend them; and these, attacked by the furious natives, were killing them in their own defence, for want of being able to explain their object, and to make themselves understood.' Vol. ii. pp. 12, 13.

This was rather disorderly for the most generous and best disciplined troops in the universe. But we should suspect that something still worse took place on another occasion, from M. Denon's silence as to the particulars; he says—

'We arrived at eleven at a large village, the name of which I could never learn, and where, unfortunately for their reputation, and to the great misfortune of the inhabitants, our soldiers misbehaved.' Vol. ii. p. 61.

At Girgeh, the modern capital of Upper Egypt, the army found great plenty of every thing.

'Bread was one sous the pound; twelve eggs, two sous; two pigeons, three sous; and a goose weighing fifteen pounds, we got at twelve sous:—could this be poverty? Such too was the abundance of these articles, that after more than five thousand of us had remained here three weeks, and had increased the consumption, and scattered out money, no rise in the demand for these necessaries had taken place.' Vol. ii. pp. 25, 26.

Upon leaving this place, information was received of the arrival of a great multitude of zealous Mussulmen from Mecca, who had joined themselves to Murad-Bey, to assist in driving the French out of the country. The following passage may help to explain the cause of this irreconcilable hostility.

'On the 13th, we were informed that our cavalry had fallen in with a number of the enemy at Mensheith, had put to the sword a thousand of these deluded people, and had pursued their march. This was certainly not a lesson of fraternization; but our position perhaps rendered an act of severity necessary: this province, which had always the reputation of being very turbulent and very formidable, required to be taught that they could not brave us with impunity: it was, besides, our policy to conceal from them, that our means were small, and our resources dispersed; and to give them the impression of our being as vindictive when provoked, as mild when treated with respect; and that we should punish severely *those who were disposed to doubt that all we did was finally for their own good.*' Vol. ii. pp. 37, 38.

The army proceeding to the southward had a rencounter with 2000 Arabs on horseback, and 6000 peasants on foot. The horsemen galloped off after a few discharges, "deserting their poor infantry," says M. Denon, who were sabred *as usual.*" The French then pillage the unoffending town of Farshiut, and a forced march is ordered at midnight, to escape from the clamour and reproaches of the inhabitants. M Denon then passes by Dindera, where he examines the ruins, and pays a hasty visit to Thebes and Latopolis The troops then pursued their desolating march to Elephantine and Syene, where their head-quarters were established for a considerable time In an excursion up the river, by which the Egyptian Fabius had retreated into Nubia, a cruel and unnecessary attack was made upon the little island of Philœ, when such was the horror that had been excited by the deportment of the invaders, that "parents were seen drowning the children they could not carry away, and mutilating their daughters to save them from the violence of the victors." The termination of the march of the French through Egypt was inscribed on a granite rock beyond the cataracts; and intelligence having been received that the Mamelukes had gone down by the desert, and were again collecting on the river, Desaix abandoned Syene, and embarked upon the stream to overtake them. M. Denon now passed Latopolis and Thebes by water, and after slightly inspecting Hermontis, came down to Kous, where the whole division halted. At this place they learned that the flotilla, with a great part of their baggage and artillery, had been captured by the Meccan auxiliaries; and that they were drawn up in force to receive them on the plain of Benhute, in the

neighbourhood. A very desperate action ensued. The enemy fired upon the French with their own artillery and ammunition; and after an obstinate resistance, retired to a large fortress, after killing sixty of their opponents. The French were twice repulsed in an attempt to storm their fortress. At length they endeavoured to set it on fire; and this horrible expedient succeeded.

'As they were without water, they extinguished the fire with their feet and hands, and even endeavoured to smother it, by throwing themselves on it. They were seen black and naked, running through the flames, and resembling so many devils in hell.' Vol. ii. p. 212.

This terrible situation they endured for the whole night.

'During the last twelve hours, the besieged had been without water; their walls were heated through; their swollen tongues choked up the passage of the air; and, in short, their situation was terrible. In reality, a few minutes after, and an hour before the break of day, thirty of the besieged, who were the best armed, forced a passage through one of our advanced posts. At day-break, our troops entered by the breaches the fire had made, and put to the sword those who, notwithstanding they were half roasted alive, still offered a resistance. One of them, who appeared to be a chief, was brought to the general. He was in so swollen a state, that, in endeavouring to stoop to seat himself, his skin cracked in every part. "If," said he, "I am brought hither to be killed, I beg that you will hasten to put me out of my misery." Vol. ii. pp. 215, 216.

The French lost nearly 200 men in those encounters, and were almost totally destitute of ammunition. They intrenched themselves, therefore, at Keneh, till supplies were received; and seem afterwards to have dispersed over the adjoining country in quest of their flying enemies. The sufferings of the unoffending natives, in consequence of these operations, seem to have been such as to excite the regrets of M. Denon. After observing that the difficulty of distinguishing their enemies by their complexion, &c. was the cause of their 'continually putting the innocent peasants to the sword,' he makes the following reflections upon the condition and treatment of these poor people, which present a most extraordinary, and, we believe, an impartial picture of the general conduct of the French in this country.

'The situation of the inhabitants, for whose happiness and prosperity we were no doubt come to Egypt, was no better. If, through terror, they had been obliged to quit their houses on our approach, on their return, after we were withdrawn, they could find nothing but the mud of which the walls were formed. Utensils, ploughs, doors, roofs, every thing, in short, of a combustible nature, had been burned for cooking; and the earthen pots broken, the corn consumed, and the

fowls and pigeons roasted and devoured. Nothing was to be found, except the bodies of their dogs, killed in endeavouring to defend the property of their masters. If we made any stay in a village, the unfortunate inhabitants, who had fled on our approach, were summoned to return, under penalty of being treated as rebels who had joined the enemy, and of being made to pay double contributions. When they submitted to these threats, and came to pay the *miri*, it sometimes happened that they were so numerous, as to be mistaken for a body of men in arms, and their clubs considered as muskets; in which case they were sure of being assailed by several discharges from the riflemen and patroles, before an explanation could take place. Those who were killed were interred; and the survivors remained friends with us, until a proper opportunity presented itself for retaliation. It is true, that, provided they did not quit their dwellings, but paid the *miri*, and supplied the wants of the army, they not only spared themselves the trouble of a journey, and avoided the unpleasant abode of the desert, but saw their provisions eaten with regularity, and might come in for their portion of them, preserving a part of their doors, selling their eggs to the soldiers, and having few of their wives and daughters ravished.' Vol. ii. pp. 44-66.

After this, it is needless to pursue our detail of cruelties and disorders any farther. We shall add one other specimen, however, of the vigour with which the work of regeneration was pursued. The indefatigable Murad had excited some disturbance in Beneadi, a town in the neighbourhood of Coptos, containing 12,000 inhabitants. To repress these, a detachment of cavalry and artillery was despatched.

'The troops, animated with the hope of plunder, in an instant swept away the whole village: those of the inhabitants that escaped, joined the remnant of the Meccans, marched against Miniet, and were put to the sword in a second encounter.' Vol. ii. p. 305.

M Denon, after visiting once more the ruins of Tentyra and Thebes, accompanied a detachment of the army from Keneh to Casseir, upon the Red Sea; and, after a stay of no more than two days, returned by the same route, accomplishing the whole expedition in the short space of a single week. He afterwards accompanied a division that was appointed to make a circuit through the conquered country; and found many opportunities of making drawings of ruins and hieroglyphics, at Luxor, at Etfu, and among the tombs of the kings at Thebes.

Immediately after his return from this excursion, he embarked on the Nile for Cairo, where he arrived just as the commander in chief was setting out to give battle to the Turks, who had disembarked at Aboukir. Out of 20,000 men, who were encamped on that spot, 6000 were made prisoners, 4000 left dead on the field, and 10,000 driven into the sea and drowned.

Within twelve days after this signal victory, Bonaparte embarked in the night at Alexandria, along with M. Denon; busied himself with chemistry and geometry during the passage; and arrived safely at the port of Frejus, after passing through the British squadron in a fog.

Such, in the abstract, is M. Denon's account of this memorable expedition; and such are a few of the new lights which his narrative has thrown on the conduct of it! We feel much admiration for the magnanimity of the Chief Consul, in patronizing the work that contains them; and leave them, without commentary, to the meditation of our readers. M. Denon, however, did not go to Egypt as the historiographer of his patron's exploits: he went to describe and delineate the monuments of its ancient grandeur. And it is time to make a few observations upon the manner in which this part of his task has been performed.

The characters of the Egyptian architecture have long been known to the inquisitive: Gigantic in all its proportions, it seems rather to have aimed at overwhelming the imagination by vastness, than at enchanting it by elegance; and while ideas of grandeur and of power are irresistibly excited by the enormous masses that are piled into regularity by human labour, we are oppressed by a certain cumbrous and severe uniformity of execution, that banishes every idea of inventive freedom, and indicates the designs of an insulated and monastic corporation. A temple upwards of two miles in circumference, constructed of stones from 15 to 36 feet in length, supported by columns 50 feet high, and 12 in diameter, and adorned with obelisks of a single stone 100 feet in elevation, and with colossal statues measuring from 50 feet to 80, may serve to give some idea of those stupendous structures, the memory of whose origin has been forgotten for centuries, and which still promise to survive all the generations of mankind. We have already insinuated that M. Denon's publication has not added very materially to our knowledge of those monuments. We do not know, indeed, that he pretends to have made a single discovery. He has given fewer *plans* than either Pocoke or Nordon, and is infinitely less distinct in his descriptions, and less learned in his references, than the former of these travellers. He has made much better, and more numerous drawings, however, than any of his predecessors, and has presented the groups of objects in a much clearer and more picturesque manner. His views in the islands of Philœ and Elephantine are a great deal more perfect; and he has copied the paintings and engraved hieroglyphics in the tombs at Thebes, and the temple of Tentyra, much more correctly and extensively. He has intermingled a variety of critical remarks and ani-

mated reflections also, that give a certain dramatic interest to his descriptions, and indicate a cultivated taste and an inflamed imagination. We shall give a very short sketch of his observations.

Lower Egypt afforded but few materials for his art or his enthusiasm. The pillar at Alexandria he supposes to have been erected in the time of the Caliphs, and imagines it to have belonged to some gigantic edifice, the portico or atrium of which he thinks may still be discovered by digging in the loose ground in the vicinity. Some mutilated fragments of cornices and colossal statues led him to fix the site of Canopus a few leagues to the westward of Alexandria. To our former description of the pyramids he has added nothing: he is enchanted, however, with the 'mild, gracious and tranquil expression,' in the countenance of the sphinx, and does not stay to peep into the catacombs. The first entire specimen of Egyptian architecture he meets with in the famous portico of the temple of Hermopolis; and his raptures are sufficiently high.

'A peasant who should be drawn out from his cottage, and placed before such a building as this, would believe that there must exist a wide difference between himself and the beings who were able to construct it: and, without having any idea of architecture, he would say this is the work of a god; a man could not dare to inhabit it.' Vol. i. pp. 380, 381.

The degenerate natives do not carry their ideas quite so high; but M. Denon assures us, that while sitting among the ruins of Luxor, he was seriously asked by one of their Sheiks, whether it was the French or the English that had erected these monuments?

He comes next to Tentyra, which he has drawn with great elegance and distinctness, to Latapolis and Thebes. The following reflections seem natural and judicious.

'Our national impatience was dismayed with the constancy of application exhibited by the people who had executed these monuments: throughout was shewn equal care and equal assiduity; which would make one believe that these edifices were not the works of their kings, but that they were constructed at the expense of the nation, under the direction of colleges of priests, and by artists whose labours were circumscribed by invariable rules. A series of years might, indeed, have brought the arts to a higher degree of perfection in some particulars; but each temple is so equally finished in all its parts, that they appear all to have been executed by the same hand; no one portion is better or worse than any other; there appears neither negligence, nor the bold strokes of a more exalted genius; uniformity and harmony prevail throughout. The art of sculpture, here made subservient and attached to that of architecture, appears to have been circumscribed in principle, in method, and in style of exe-

cution; a single figure expresses nothing, when taken out of its exact station in the group in which it is a part; the sculptor had his design chalked out for him, and could not introduce any deviation which might alter the true meaning that it was intended to convey: it was with these figures, as with the cards that we use for our games, the imperfection of design is overlooked, that no obstacle may arise in instantly distinguishing the value of each. Vol. ii. pp. 72, 73.

With the huge temples of Carnac and Luxor he seems somewhat out of humour, because they are too large to be distinctly represented upon paper. A village, containing 3000 souls has been erected on the ruins of a part of the latter; and yet M. Denon informs us, that its vast courts and galleries have all the grandeur and desolation of an uninhabited ruin; the huts that are built on the roofs and in the corners having the appearance of swallows' nests in our houses, which defile them without altering or concealing their general appearance! After having wandered among these stupendous remains, M. Denon makes the following striking and characteristic reflections.

'Still temples, nothing but temples! and not a vestige of the hundred gates so celebrated in history; no walls, quays, bridges, baths, or theatres; not a single edifice of public utility or convenience; notwithstanding all the pains which I took in the research, I could find nothing but temples, walls covered with obscure emblems; and hieroglyphics, which attested the ascendency of the priesthood, who still seemed to reign over these mighty ruins, and whose empire constantly haunted my imagination.' Vol. ii. pp. 195, 196.

And afterwards—

'I still admire with awe the organization of such a government; its stupendous remains yet excite the mingled sensations of respect and dread. The divinity, in sacredotal habits, holds in one hand a book, and in the other a flail: the former, no doubt, to restrain, and the latter to punish: every thing is measured by the law, and enchained by it. The fine arts, subject to the same severe restrictions, bend under the weight of fetters, and their soaring genius is pinioned to the earth. The unveiled emblem of generation, traced even in the sanctuary of the temples, announces, that to destroy pleasure it was converted into a duty: not a single circus, not a single theatre, not a single edifice for public recreation; but temples, but mysteries, but initiations, but priests, but sacrifices; ceremonies for pleasures; for luxury, sepulchres.' Vol. ii. pp. 288, 289.

Among the most valuable and original of the drawings with which M. Denon has presented us, are the representations of those paintings and reliefs which still continue to adorn the tombs of the kings and other excavations at Thebes, and the cells adjoining to the temple of Tentyra. In the former he

found four apartments, the walls of which were covered respectively with different sorts of arms, with implements of agriculture, with instruments of music, and with articles of furniture. Those paintings which are said to be in excellent preservation, afford a complete view of the *costume* of the ancient Egyptians, and the most decisive evidence of the progress they had made in the arts. War chariots, drawn by two and by four horses, form a frequent object in these decorations; and, in another part of the temple, the sculpture represents persons vaulting over ropes, and asses dancing on their hind legs. We do not remember that the graver Egyptians are ever themselves exhibited as performers in a dance.

Our limits will not permit us to make any observations upon the zodiac, and other astronomical delineations that M. Denon has copied from the painted ceilings of Tentyra; but we cannot omit his account of the discovery of an ancient alphabetical manuscript which he found in the hand of a mutilated mummy that was brought to him by the Arabs for sale.

'The reader should be a traveller, an inquirer, and an amateur, to sympathise with my rapture on this occasion. When it was brought me, I felt that I turned pale with anxiety: I was going to express my indignation at those who had violated the integrity of this mummy, when I perceived in its right hand, and resting on the left arm, a roll of papyrus, on which was a manuscript, that I should perhaps have never seen without this violation. I then blest the avarice of the Arabs, and my good fortune, which had put me in possession of such a treasure, which I hardly dared to touch for fear of injuring this sacred manuscript, the oldest of all the books in the known world. I could not venture to entrust it out of my sight, and all the cotton of my bed was devoted to wrapping it up with the utmost care. What could be its contents? Was it the history of this personage, the remarkable events of his life? Was the period ascertained by the date of the sovereign under whom he lived? or did this precious roll contain maxims, prayers, or the history of some discovery?'—Vol. iii. pp. 71, 72.

We do not pretend to be able to decypher this manuscript, and do not recollect to have heard of any communication having been made to the public in relation to it. M. Denon observes, that the same character and sets of characters recur repeatedly in the course of it.

We cannot take our leave of these *colossal* volumes without entering our protest against such a form of publication. M. Denon's taste has been formed perhaps upon the gigantic monuments of the Thebaid, and will relish no book that is not as large as a pannel charged with hieroglyphics; but in this quar-

ter of the world, we believe there are few readers who will think themselves indemnified for the great price of this work by the satisfaction of turning over four square feet of pasteboard in every leaf, and having their eyes dazzled by characters like those on a tomb-stone. Even in the volume of plates, the huge size of the page is turned to no sort of use; most of the views being given in small compartments, that do not occupy one eighth part of the sheet, and the paper being covered by a single subject in no instance but the fanciful representation of two battles with the Mamelukes. We are the more inclined to censure the injudicious magnitude of these volumes, as there is nothing either in the style or the matter of M. Denon, that tallies with so much magnificence. He has made some fine drawings of monuments that had been drawn before, and brought away some slight sketches of hieroglyphics that had not been previously copied; and he has recorded his observations and adventures in a flippant and familiar style, that partakes less of dignity than of pertness; and seems better adapted for the undress of an occasional pamphlet, than for the monumental vastness of such a publication as the present.

ART. IX. *Politique de tous les Cabinets de l'Europe, pendant les regnes de Louis XV. et de Louis XVI. &c.* MSS. trouvés dans le Cabinet de Louis XVI. Seconde Edition. Considerablement augmentée. Par. L. P. Segur l'Ainé, Exambassadeur. 3 tom. 8vo. pp. 1238. à Paris. Chez Buisson, An. 9. (1801.)

THE balance of power, and the natural system of international relations which has grown up in modern Europe, have afforded to one class of politicians perpetual subject of ridicule and invective, and to another class the constant opportunity of defending or attacking every measure, of discussing, or affecting to discuss, every political subject, by a reference to certain terms of art and abstract ideas, of which it is fair to suspect that they little understood the meaning and the force.

Of these reasoners or declaimers, the former sect are undoubtedly the most dangerous. The refinements of modern policy which have sprung from the progressive improvement of the human species, and have, in their turn, secured that progress, and accelerated its pace, are in no danger of being either corrupted, or brought into disrepute, by the petulance of pretended statesmen. But the sophistries and cavils which political sceptics and innovators have founded, partly on a misconception of the theory, and partly on a misstatement of the facts, tend directly to a degradation of the system in the eyes of superficial reasoners, and may

ultimately renew a state of things, from which the unassisted efforts of national heroism would be altogether unable to redeem any one community.

The attacks of those men have, moreover, been extremely inconsistent and contradictory. While, at one time, they maintain, that the idea of a political equilibrum is pregnant with every species of absurdity, and would produce, if carried into the actual affairs of nations, those very evils which the system is extolled for preventing: at another time, we are told that the notion is simple and obvious; that it arises naturally out of the passions of men; that it is no refinement of modern statesmen, but has influenced the councils of princes and commonwealths in all ages of the world. Now—the balance of power is an unintelligible jargon, invented to cover every scheme; to furnish pretexts for every act of national injustice; to lull the jealousy of the people in any emergency; or to excite their alarms upon any occasion. Now—it is useless and superfluous; an interference with the natural order of things; or an attempt to effect that which would happen at any rate. Now—it is pernicious in the extreme; the parent of wars and offensive alliances; the exciting cause of national violence; the watchword of ambitious princes and destroying commonwealths; a refinement only of injustice; and a system of nothing but treachery or caprice. It is very manifest, without any argument, that the system of modern policy cannot be liable to all those accusations at once, and that the declaimers, who have used such language with respect to it, must have been talking of very different things at different times. But as the foreign policy of nations was never, at any period of modern story, so interesting as at present, we shall proceed to offer a few observations upon that system which has been so little understood, and which is the foundation of the important work now under review.

The national jealousy, by which at all times the European states are animated, and which ranges them on different sides in each public crisis, has been denominated, not a principle of policy, but a national emotion. Nations, it is said, like the individuals which compose them, are moved by caprice, and actuated by passions; excited to contention by envy and hatred; soothed to reconciliation when exhausted by the efforts of their enmity; leagued in friendship by the dictates of an interested prudence; united together by the thirst of plunder; or combined for the gratification of some common revenge. The principle (we are told) which has been pompously called the great spring of civilized policy, is perhaps nothing more than a systematic indulgence of those natural feelings that impel the savage to attack his more wealthy neighbour, or unite rival hordes in a temporary friend-

ship, when invaded by a powerful and common enemy. The policy (it is added) which we have heard extolled as the grand arcanum of modern statesmen, and dignified with the title of a system, is nothing more than the natural result of a conflict between desire of conquest and of security, refined on by ingenious men, and spun into a regular theory.

These remarks are partly true, and partly unfounded. It is true, that nations are guided by human councils, and subject, of course, to the passions and caprices of men; but it is no less certain, that the more regularly any system of government is established, the more will men of sober minds acquire a weight in the management of affairs; and that the longer the art of administering the concerns of empires is practised, prudence will gain the greater ascendency over passion. It is true, that the dictates of feelings not always amiable, and often outrageous, are frequently, more than any impulse of reason, the springs which actuate the operations of states; but it is equally true, that in all animals the passions themselves are implanted for the wisest of purposes; that instinct is the principle to which, more than reason, the preservation of life, and the maintenance of order in the universe, must be ascribed; and that national councils may be operating what no foresight could combine, while they appear to be swayed only by prejudice and passion. The existence of rude states is indeed frequently preserved, and their civilization insured, by the operation of principles, to assist the development of which is the great pride of the most learned and skilful statesmen: yet, the want of this assistance in those rude times, and the want of a constant superintendence and control, which renders the popular feelings useful in one case, and harmless in another, is certainly the cause of that instability of national power, and those perpetual changes in dominion—those constant broils, and that state of unceasing insecurity, to which we may attribute the many revolutions in the situation of savage communities, and the long continuance of their barbarism.

That the system which we are now considering has oftentimes been abused, no one can deny. What human institution can defend itself from this charge? But many of the evils which are ascribed to the principle in question, have been owing only to an erroneous conception of its nature. Many of them have arisen from failing to carry the line of policy recommended by it, to the lengths which it enjoins; and, in not a few instances, those events which have been deemed pernicious, would have proved altogether fatal, had not its influence modified and controlled them. We are desired, with no small appearance of triumph, to view the history of the last century; and to mark the manifold wars which the balancing system produced; the various intrigues

to which it gave rise; the destructive conquests of which it furnished the pretext; and the national catastrophes which it could not avert. But had it not been for that wholesome jealousy of rival neighbours, which modern politicians have learned to cherish, how many conquests and changes of dominion would have taken place, instead of wars, in which a few useless lives were lost, and some superfluous millions were squandered? How many fair portions of the globe might have been deluged in blood, instead of some hundreds of sailors fighting harmlessly on the barren plains of the ocean, and some thousands of soldiers carrying on a scientific, and regular, and quiet, system of warfare, in countries set apart for the purpose, and resorted to as the arena where the disputes of nations may be determined? We may indeed look to the history of the last century as the proudest æra in the annals of the species; the period most distinguished for learning, and skill, and industry; for the milder virtues, and for common sense; for refinement in government, and an equal diffusion of liberty; above all, for that perfect knowledge of the arts of administration, which has established certain general rules of conduct among nations; has prevented the overthrow of empires, and the absorption of weak states into the bodies of devouring neighbours; has set bounds to the march of conquest, and rendered the unsheathing of the sword a measure of the last adoption; whereas, in other times, it was always resorted to in the first instance.

In the beginning of that century, we saw the gigantic power of France humbled by a coalition of princes, each resolved to undergo immediate loss, and run a great present risk, in order to prevent the greater chance of ruin at the distance of a few years. In ancient times the Stadtholder would have been more jealous of Britain or Austria, than of France. The great Monarch, like Cæsar, would have found a Divitiacus in the heart of the empire. By splitting the neighbouring potentates into adverse factions, and fighting one against the other, he would, in a few years, have subjugated the whole. No power would then have conceived that common prudence required an immediate sacrifice of peace, in order to ward off a distant peril. All would have waited quietly till the invasion came on; then, fighting with a desperate, but an insulated valour, all would have been conquered in detail by the ambitious enemy of Europe; and the story of the Roman Empire would have been renewed, when submission to foreign power, and loss of liberty, and interruption of peaceful pursuits, were no longer the phantoms of vulgar terror, or the themes of idle declamation, but real, and imminent, and inevitable, calamities.

In the middle of the century, we indeed saw an ancient crown despoiled of its hereditary provinces; and the neighbouring states in vain attempting to crush the new-born energies of the Prussian power. It is, however, extremely doubtful whether the principles of an enlightened policy would not have favoured the rise of a power, whose professed and natural object was the balancing of the Imperial House, and the protection of the smaller princes of the empire, against the preponderating, and formerly absolute, sway of the Austrian monarchs. And, at any rate, admitting the other powers to have been actuated by no such views, it is clear that the success of the Silesian usurpation must be attributed to the actual dereliction of the balancing system, and not to its inefficacy; for, both in the Silesian and in the seven years war,* the part of Prussia was openly espoused by some of the great powers; in the former, by France and Bavaria; in the latter, first by England, and then by Russia herself. The preservation and accurate adjustment of the balance might perhaps have required some such event as the acquisition which Prussia actually made; but if the immediate object of the system, the maintenance of the established division of power, was held to be a more important consideration, it is clear that the part of Prussia ought not to have been taken by France and Bavaria, in the one case, or by England and Russia in the other, until the usurped dominions of Austria had been restored; and then the allies of that power ought instantly to have deserted her, if she did not remain satisfied with the fruits of their interference.

Soon after the seven years war was terminated, the dismemberment of an ancient European kingdom was projected by the powers who had been most exhausted in the Silesian contest, and who wished to indemnify themselves for their losses at the expense of the Poles. The success of this iniquitous transaction, although it only demonstrates that the modern system has not been carried to its proper length, that it is incapable of changing the nature of men, or disarming the ambition and rapacity of princes, has been always quoted by a certain set of politicians, as an irrefragable proof of the futility and inefficacy of the great principle of modern politics. That calamitous event is indeed a sufficient proof, that the statesmen of Europe had for a while forgotten their most sacred principles, and that the princes who did not interfere to prevent it, were blind to their best interests. It serves, therefore, to shew us what would be the situation of the world, were the maxims of ancient times to be revived, and the salutary system of

* It is well known that the peace of Dresden was only a truce; that the war of 1756 owed its origin to the cause of the former contest; and that the possession of Silesia was only secured by the peace of Hubertsburgh.

modern Europe to lose its influence over the councils of states; but, for this very reason, the partition of Poland cannot, with any truth, be said to prove the inefficacy of those principles, by acting in direct opposition to which, the great powers of Europe permitted it to happen. If, however, the policy of the neighbouring states provided no check to the injustice of the partitioning powers, the influence of the balancing system upon the conduct of those parties themselves was productive of the most important and beneficial effects. Had the ancient maxims of national indifference and insulation prevailed in the cabinets of princes at the crisis of Polish affairs in 1772, the distracted state of that unhappy country would indeed have called in the interference of foreign force. But this interference would have proceeded from one quarter alone. Poland would have been overwhelmed, and its vast resources appropriated, by one only of the conterminous powers, probably by the Russian empire, which would thus have suddenly acquired a preponderance fatal to the rest of Europe; and, without receiving any check in the proportional aggrandizement of the neighbouring states, would have been enabled to stretch its resistless arm into the very heart of the great western commonwealth. But the prevalence of that national jealousy, and anxious attention to the affairs of other states, which is the master principle of the modern system, prevented the usurpation of Russia, even at the moment when she was actually mistress of the kingdom, garrisoned the capital with her troops, and ruled the national councils by a viceroy, under the name of ambassador. With all these circumstances in her favour, she was not even the first proposer of the partition. Her natural enemies, Austria and Prussia, actually gained a greater share of the spoil; and, instead of being the first victims of her extended empire, as they infallibly would have been in ancient times, they have themselves acquired, at the same moment, an increase of resources, which enables them effectually to withstand the augmented force of her power.

Although, then, it is extremely absurd to adduce the partition of Poland as an instance of the balancing system, (after the manner of the Prussian statesmen*), it is equally ridiculous to assert, that it proves the inefficacy of that system, or to deny that the rest of Europe has been saved by the influence of those principles upon the parties in the usurpation, which should have led the other great powers of Europe to prevent it. It is scarcely neces-

* Count Hertzberg, (the King's first minister in 1772), in a speculative essay on this subject, gives the partition as an apposite case of the balancing system. It was made, he says, 'Selon les principes d'une balance dont les trois puissances partageantes etoient convenues entre elles.' Mem. tom. i. p. 296.

sary to remark, that we by no means intend to assert any thing further than the injustice and impolicy of the transaction upon a great scale: at present, we only look to the effects of the balancing system in maintaining the independence of the weaker states. The case of Poland, as it appears to us, is one of the very few instances, which have ever occurred, of a nation being placed in such unnatural circumstances of embarrassment, turbulence, and degradation of every sort, that no change of affairs could possibly render it worse, and scarce any revolution, by domestic violence, or foreign invasion, could fail to alter it for the better. Setting apart the high-sounding phrases of patriotism and national spirit, and the feelings of admiration which the very natural emotions of pity have taught us to couple with the name of Poland, it is impossible for a sober-minded observer not to perceive, that ages of the most debasing servitude had utterly disqualified the Polish boors for enjoying the privileges of free subjects; that a lifetime divided between unceasing tumult in public, and the revellings of a boisterous, barbarous hospitality, had utterly unfitted the rest of the State from co-operating in the formation of a constitution which should possess either energy or regularity; and that the happiest event which has ever befallen the fine country of Poland, has been a dismemberment, wept over and declaimed upon by those who had no experience of its necessity, or need of its benefits. Those benefits have most undoubtedly been the pacification of that unhappy kingdom, by the only means which human fancy could have devised for accomplishing this end, without endangering the security of the other powers, namely, a fair division of the country among the neighbouring and rival powers, and a consequent communication of the inestimable blessings which their ancient subjects enjoyed under a system of peaceful government and regular police.

The memorable events which took place at the close of the 18th century, it is almost needless to observe, were the immediate consequence of an adherence to the principles of the modern system of international policy. The internal state of France would never have alarmed the neighbouring nations in ancient times. Without anxiety, they would have seen the overthrow of all regular government, the progress of Jacobin contagion, and the development of those popular energies which armed a people, devoted exclusively to war, with resistless power to accomplish the grand objects of their demagogues, the overthrow of altars and thrones, and the establishment of universal empire. Far from combining to resist the progress of the new horde, they would have split into factions, and assisted its destructive course. No efforts to check it would have been thought of, until all resistance was too late; nor would those modern Gauls have found resistance effectual to oppose them from the Manlius of any capitol

in Europe. That this has not been the fate of every thing refined and valuable in Europe, is owing to the degree in which the maxims of the balancing system began to operate their usual effects at the very moment when the first changes took place in France. But that much injury has been done; that many independent states have been humbled; that some powers have been overwhelmed; and that melancholy changes have been effected in the distribution of dominion, has been owing to the unprincipled ambition of certain princes; the taint of disaffection in the people of some countries, which have, together, prevented the modern system of external policy from being followed out, and have given to the common enemy of national independence an advantage proportioned to the neglect of those sound and necessary principles.

Let us hear no more, then, of the last century, as affording arguments against the balance of power. That eventful period in the history of mankind has been marked by the formation of vast schemes, which either by their success may allure, or by their failure may warn, future statesmen to cling still closer by those maxims of conduct which are necessary to the preservation of liberty and peace.

The remarks which have been frequently made on the knowledge of the ancients, in this branch of policy, are for the most part just. Mr. Hume, so far as we know, is the first who stated this point, in an essay replete with accurate reference, and distinguished acuteness of classical illustration, but mingled also with some injurious perversions of facts in more recent history; and with the misstatement, in one or two points of the great system itself, which he appears to treat with disrespect.* The celebrated passage in Polybius, which has so often been quoted,† is indeed a distinct statement of one general principle in that system; and the orations of Demosthenes contain some discussions of the most delicate parts of the theory—discussions which, from the events of his times, we may be assured were but imperfectly comprehended in those early ages.‡ But the number of discoveries or inventions, which have been suddenly made in any branch of knowledge, is small indeed. All the more important steps in the progress of the human mind may rather be termed improvements than inventions: they are refinements upon methods formerly known—generalizations of ideas previously conceived. By how many small and slowly following steps was the true nature of the planetary motions brought to light! By how many insensible gradations did that

* Essay on the balance of Power. † Polyb. lib. i. cap. 83.
‡ Particularly the famous speech for the Megalopolitans—*passim*.

theory receive its explanation from the great law of gravitation, which, constantly and universally acting, keeps each body in its place, and preserves the arrangement of the whole system? In like manner has that theory of political expediency been gradually unfolded, and its parts refined, which regulates the mutual actions of the contiguous nations of Europe; subjects each to the influence of others, however remote; connects all together by a common principle; regulates the motions of the whole; and maintains the order of the great complicated system. As the newly discovered planets are found to obey the same law that keeps the rest in their orbits; so the powers, which frequently arise in the European world, immediately fall into their places, and conform to the same principles that fix the positions, and direct the movements of the ancient states. And as, even in this enlightened age, we have not yet succeeded in discovering the whole extent of the planetary law, or in reducing certain apparent irregularities of the system to the common principles; so, in these days of political improvement, we have not attained the utmost refinements of international policy, and have still to lament the many irregularities which continue to disturb the arrangement of the European commonwealth.

It is not, then, in the mere plan of forming offensive or defensive alliances: or in the principle of attacking a neighbour, in order to weaken his power, before he has betrayed hostile views; or in the policy of defending a rival, in order to stay, in proper time, the progress of a common enemy: it is not in these simple maxims that the modern system consists. Those are, indeed, the elements, the great and leading parts of the theory; they are its most prominent features; they are maxims dictated by the plainest and coarsest views of political expediency: But they do not form the whole system; nor does the knowledge of them (for it cannot be pretended that ancient states were in possession of any thing beyond the speculative knowledge of them) comprehend an acquaintance with the profounder and more subtile parts of modern policy. The grand and distinguishing feature of the balancing theory is the systematic form to which it reduces those plain and obvious principles of national conduct; the perpetual attention to foreign affairs which it inculcates; the constant watchfulness over every motion in all parts of the system which it prescribes; the subjection in which it tends to place all national passions and antipathies to the views of remote expediency; the unceasing care which it dictates of nations most remotely situated, and apparently unconnected with ourselves; the general union, which it has affected, of all the European powers in one connected system—obeying certain laws, and actuated, in general, by a common principle; in fine, as a consequence of the whole, the

right of mutual inspection, now universally recognised among civilized states, in the rights of public envoys and residents. This is the balancing theory. It was as much unknown to Athens and Rome, as the Keplerian or Newtonian laws were concealed from Plato and Cicero, who certainly knew the effect of gravitation upon terrestrial bodies. It has arisen, in the progress of science, out of the circumstances of modern Europe—the greater extent and nearer equality of the contiguous states—the more constant intercourse of the different nations with each other. We have been told by historians,* that the principle of the balance of power was a discovery of the 15th century made by the Italian politicians, in consequence of the invasion of Charles VIII. Against such statements as this, it is perfectly fair to adduce the arguments of Mr. Hume and others, who have traced, in ancient times, vastly more refined notions of policy, than any that dictated the Italian defensive league. It was, in truth, not to any such single event, that the balancing system owed either its origin, or its refinement; but to the progress of society, which placed the whole united states of Europe in the same relative situation in which the States of Italy were at that period, and taught them not to wait for an actual invasion, but to see a Charles at all times in every prince or commonwealth that should manifest the least desire of change.

The circumstances of the European states, by promoting national intercourse, have been singularly favourable to the development of those principles of easy and constant union. Consolidated into one system of provincial government under the empire of Rome they were separated by the same causes, and nearly at the same time. Reduced by a people, whose character and manners were never effaced by the most rapid conquests, or most remote emigations, they were formed into divisions, under constitutions of the same nature peculiarly calculated to preserve the uniformity of customs, which originally marked the whole. The progress of political government has been similar in all, from the dominion of the nobles to the tyranny of the prince, and, in these latter times, to the freedom of the people. That spirit of commercial intercourse, which produces a perpetual connexion, little known in the ancient world, has conspired with the similarity of situation, and the resemblance of manners, to render Europe a united whole within itself, almost separated from the rest of the world—a great federacy, acknowledging, indeed, no common chief; but united by certain common principles; and obeying one system of international law.

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* Robertson's Charles V. vol. i.

It is from these natural sources, through this gradual progress, and not suddenly from any accidental occurrences, in the fifteenth century, or from the cabinets of particular statesmen, that we must deduce the refined system of interference, which has regulated, for so long a time, the councils of Europe in foreign affairs: and we are to consider the union of the Italian states against the invasion of Charles, merely as a symptom of the same progressive improvement, which has since taken place in the other parts of Europe.

The question, of the propriety of a nation interfering with those concerns of its neighbours, which have only a remote connection with its own interests, may be stated in two different forms;—either as a general question applicable to any state, or in its particular reference to the situation of a nation placed in certain circumstances. Thus many politicians, who have no hesitation in recommending the balancing system to such powers as Austria and Prussia, placed in the heart of Europe, and surrounded by many other states of various complexions and magnitudes, are yet of opinion, that the situation of Britain is very different; that she is by nature, insulated from the rest of Europe; that she can defend herself against any invasion, by means of her natural barrier and internal resources; and that she ought not to sacrifice the improvement of those resources, and the means of maintaining peace, to the vain wish of holding the European balance, and embroiling herself in the stormy politics of foreign states. To enter fully into the discussion of this great national question, would carry us much beyond our necessary limits: But we cannot avoid remarking, that so long as Great Britain is engaged in a commercial intercourse with other nations; so long as her insular situation only serves to promote and extend those commercial relations; so long as other states possess a large portion of sea-coast, engage in a wide commercial circle, and are acquiring a navy of formidable power; so long as Britain interferes with them in other quarters of the globe, where her dominions are the most valuable and extensive,—it is an abuse of language to talk of her being separated from the continent of Europe by the straits of Dover. The transport of an army by sea is often more easy than the march over a considerable tract of land. The fate of a naval engagement is generally more quick, decisive, and dependent upon fortune, than the siege of barrier towns, or the forcing of mountainous passes; and the elements may, by retaining the British fleets in Plymouth or Portsmouth, while they waft the enemy's squadrons from Brest or the Texel, destroy in a moment that bulwark to which we vainly intrusted the national defence, and render utterly useless the whole *natural force* of the country, which, after the change of weather, may display, triumphantly

its flags over every sea in Europe, while the Consular legions are revelling in the plunder of the Bank, or burning all the dock-yards in the kingdom. To say that England may trust to her fleets, then, is to recommend a full reliance upon the chance of a single battle, or the event of a sea chace; to inculcate a silly confidence in good fortune, and to advise that the fate of Great Britain should be committed to the changes of the elements, the shifting of a wind, or the settling of a fog. It is to her armies, that every nation, insular or continental, must look for her sure and *natural defence.* But although it would be absurd to recommend, that the internal resources of a country should be neglected, either in order to favour its naval force, or in order to commit its defence to the movements of intrigue, and the efforts of foreign policy; yet he would be an equally dangerous counsellor who should advise us to neglect those means of preventing war, and of rendering it harmless when it does occur, which are only to be found in a compliance with the principles of the balancing system.

When the different nations of Europe placed their whole glory in the splendour of their warlike renown, and attended only to the improvement of their military resources, every person of free rank was a soldier, and devoted his life to the profession of arms. But as soon as the arts of peace acquired an ascendency, and other fame besides that of martial deeds was sought after, war became an object of dread, as deranging the main operations of society, and exposing the national independence to unforeseen casualties and dangers. Instead of being followed for its own sake, it was now only resorted to as a necessary evil, to avoid a greater risk. The first great consequence of this change in the occupations and character of men was the separation of the military from the civil professions; the intrusting a small class in each community with the defence of the rest; the adoption of standing armies, by far the most important improvement in the art of government, with which history has made us acquainted. As this great change has disarmed war of almost all its dangers, so another change, equally important, has arisen out of it—rendered wars much less frequent, and confined their influence to a small portion in the centre of the continent. The European powers have formed a species of general law, which supersedes, in most instances, an appeal to the sword, by rendering such an appeal fatal to any power that may infringe upon the code: by uniting the forces of the rest inevitably against each delinquent; by agreeing, that any project of violating a neighbour's integrity shall be prevented or avenged, not according to the resources of this neighbour, but according to the full resources of every other member of the European community; and by constantly watching

over the state of public affairs, even in profound peace. Such, at least, would be the balancing system, carried to its full extent; and such is the state of refinement towards which it is constantly tending. The division of labour, too, and the separation of the military profession, has been carried, by some of the richer nations, to a still greater extent than the mere embodying of standing armies. Those states, which are the most injured by the operations of war, are also the richest in superfluous stock. They have contrived a species of pecuniary commutation of war, similar to the commutation of military service, which paved the way for the introduction of standing armies: they have managed to turn off the battle from their gates, by paying less wealthy allies for fighting in their cause at a safe distance. The operations of war are in this manner rendered very harmless, and a foundation is laid for their gradual disuse. A few useless millions, and a few still more useless lives are sacrificed; the arts of peace continue to flourish, sometimes with increased prosperity; and the policy of preferring to purchase defeat at a distance, rather than victory at home—of paying allies for being vanquished, rather than gain the most splendid triumphs on their own ground—has been amply rewarded by the safety, increased resources, and real addition of power, which results from an enjoyment of all the substantial blessings of peace, with the only real advantages of necessary warfare.

Such are the general outlines of the modern system, founded upon the preservation of a balance of power. The science which professes to discuss the general principles of this system, and their particular application in detail to the actual situation of the European powers, is, of consequence, next to jurisprudence and police, the most important that can occupy the attention of the statesman. It has, however, been alleged, that this is an inquiry reducible to no general or fixed principles; that it does not deserve the name of science; that it depends on the caprices of a few individuals, and the variations in their views or measures, occasioned by accidental occurrences. Mr. Hume, in particular, at the very time when he recommends the drawing of our conclusions on subjects of domestic policy as fine as it is possible, adds, "that in these affairs, the inferences rest on the concurrence of a multitude of causes, not, as in foreign politics, upon accidents, and chances, and the caprices of a few persons."* It may, however, be observed, that the very same general arguments, so irrisitibly stated by that acute and profound writer, to prove that politics may be reduced to a science,† apply as well to the foreign as to the domestic polity of a state. A few more

* Political Essays. † Essay III.

particular remarks on this point may serve to set it in a light sufficiently striking.

1. All the governments of Europe have tended uniformly, and not very slowly, towards greater freedom and mildness, since the rise of the commercial policy of modern times, and the general diffusion of knowledge by the art of printing. Instead of a collection of despots, actuated, in all their plans of internal and external arrangement, by caprice or accident, the system of European princes is now an assemblage of deputies from the different nations, which have intrusted them with certain powers and commissions, for the public good. In the execution of their trust, indeed, they are not directly accountable to any human authority; but, even in the states where no constitutional control is appointed to the power of the crown, the indirect influence of a numerous and enlightened people is uniformly strong upon the councils of the monarch. It is always his interest to rule by gentle and agreeable means, and to further, by every measure in his power, the prosperity of his state. This interest, though for a while it may be concealed from his eyes, or over-ruled by opposite passions, can never be long hidden from him; but must always, in the long-run, force itself upon his attention, and be, for the most part, the guide of his conduct. The government of the most despotic princes offers constant examples of a submission to that opinion, which can scarcely there make itself heard; and not a few instances of obedience to the voice, which, from its resistless power over divans themselves, has been emphatically called the voice of God. A check is thus provided for the violence of royal passions, and a guide or regulator for the movements of even a despot's caprice. In the free governments of modern Europe, however, the influence of public opinion is direct; the voice of the nation is acknowledged; and the will of the people is in general obeyed, the only doubt being as to the particular line of conduct which that voice and will directs.

2. As almost all princes rule by the advices of ministers, and must execute their decrees by the assistance of a great number of deputies; the connexion of those men with the people at large; their responsibility to their country; the odium and personal danger which attaches to a failure of any plan executed by their intervention, whether suggested by their councils or not, must quicken their perception of every national danger, and embolden them to withstand, in the cabinet, any pernicious measure dictated by the ignorance or caprice of their master. Where so many must thus, in some degree, concur in every act of the sovereign power, and so many are responsible, in the eyes of the country, for every abuse in the government, it is manifest that the chances of wilful misrule, through the unprincipled caprice,

or rashness, or levity, or passions of a single monarch, are considerably diminished; and that the true interests of the country, in its relations to foreign states, can only be lost sight of or thwarted during casual intervals, when the ministers are utterly careless of popular opinion, in comparison of their master's will, and the tyrant is so shortsighted, and so corrupted by his unfortunate situation, as to despise his best interests, and disregard his chief danger. The actual responsibility of every minister to the country, even in governments the most unprincipled and despotic, and the submission of the sovereign to the will of the people, however debased, is proved by so many striking facts of common notoriety, that it is scarcely necessary to state them in illustration of the foregoing remarks. 'The Soldan of Egypt' (says Mr. Hume †) 'or the Emperor of Rome, might drive his harmless subjects, like brute beasts, against their sentiments and inclinations; but he must have at least led his Mamelukes or prætorian bands, like men, by their opinion.' There is evidently somewhat of inconsistency between the two parts of this proposition. For, unless those Mamelukes and prætorian guards were so numerous as to command the whole state, and so separated from the rest of the commonwealth as to participate in no degree in their feelings, and to be altogether unconnected with their wrongs, it is clear that in the long-run they must have been influenced by the national opinion. At any rate, although, in the *domestic* concerns of Egypt or Rome, the interest of the two orders might be frequently opposed to each other, and those of the people be neglected, there can be no doubt that, in the *external* relations of the state, the two classes formed but one body, and the best interests of the whole were the same. The caprice of the soldan, or emperor, then, could never, for any length of time, stifle or disobey the voice of those bands whom he had to guide by their good will, and rule by their opinion; that is, partly by yielding to, and partly directing their wishes.

In the most despotic governments of the East, the fury of a mob frequently obtains a change of ministers, which is always a change of measures. The vizier who commands a vanquished army, who advises an unprosperous war, or concludes a disadvantageous peace, is generally bowstringed at the first murmurs of the mob, and his body thrown to appease them. This is a sacrifice made by the most absolute of monarchs to the will of the most enslaved people in the world. The power of the Grand Signior, which lays every Mussulman prostrate at his feet, does not extend to the enacting of any law which might add to the taxes of the empire. He may crush the proudest of his bashaws, and squeeze from the richest of his officers every particle of

† Essay IV, on the Principles of Government.

their accumulated wealth. He may bowstring thousands, whom ancient opinion and religious prejudice has taught to believe that their lives were made for his sport. But he dares not issue any regular ordinance for a single general impost; or the same people, who, in the strange contradictions of this unnatural state of society, had kissed the axe that was lifted against their lives, would now raise their united voice with a force powerful to shake the innermost recesses of the seraglio.

When Peter the Great of Russia wished to invert the order of succession to the Imperial throne, from an unnatural antipathy to the Tzarowitch, whose rights had formerly been in some degree acknowledged, he did not think it sufficient to issue an express edict, declaring the power of the emperor to fix upon any successor that he chose. He began, by accustoming the minds of men to such an unsettled and arbitrary mode of inheritance, in cases of private property. He published a previous ordinance, obliging each father to bequeath his whole real property to one of his children, leaving him the choice of his heir. This singular barbarian, notwithstanding the many vices that stained his character, and the constant cruelties in which his reign was spent, had the merit of beginning the civilization of his boundless empire. He wished to raise his savage and enslaved people to the rank of men; and the ordinance which we have mentioned, is an instance of submission to their will, from a real or supposed necessity, and from a wish to bring about a change in their opinions. The succeeding Tzars have adopted a regular mode of receiving the opinions of the most respectable and enlightened part of their subjects, and of imposing a check on their own authority. Upon a new and general law being drawn up, the *ukase* containing it is transmitted to each of the *governments*, and the viceroys may assemble the different *courts* to consider it. If they unanimously disapprove, they may present a *representation* against it to the senate. The law is reconsidered, and is not obligatory on the realm, until another ordinance has been issued confirming the former.* The silly passion for legislation which distinguished the Emperor Joseph II. produced many laws disagreeable to the people: and although the whole tenor of that weak monarch's reign demonstrates how little he was disposed to recognize the rights of his subjects, yet those obnoxious regulations were generally abrogated almost as soon as passed. While he was dragooning the provinces of the Netherlands into a surrender of their most sacred privileges, and purposely acting in direct opposition to the wishes of his constituents in the Imperial diet, he could not obtain the acquies-

* Tooke's Russian Empire, vol. ii. p. 395.

cence of Austria (where his power is absolute by law) in a trifling and absurd regulation prescribing the interment of dead bodies in lime-pits: and the discontent of that part of his empire obliged him to abandon this idle measure.*

3. It must be evident to every one, that the only reason why the theory of international relations has been supposed incapable of being reduced to fixed principles, is, the apparently small number of men concerned in regulating the external policy of states. Where a great number of people are nearly interested, and take a part in each measure; where their consent, advice, or acquiescence, is necessary to the execution of every plan, it is clear that there is always a much smaller chance of capricious and irregular operations being carried through, than where one or two individuals only are concerned. It is a remark of Machiavel, distinguished by his usual acuteness and profundity, that although in matters of general discussion, the people are often mistaken, yet in matters reduced to particulars they are most sensible and judicious; that the prince is much more apt to be ungrateful, both through avarice and suspicion, than the people; that the multitude is generally both wiser and more constant than the prince; and that those leagues or confederacies are more to be trusted which are made with free states, than those which are made with princes. For the demonstration of these important and curious propositions, both by reasoning and illustration, we refer our readers to the discourses of the Florentine Secretary,† more particularly the fifty-ninth chapter of the first book, which is most in consonance with our present reasonings, and contains as strict a demonstration of the principle, as any that we meet with in geometry, making allowance for the different nature of the evidence‡. As we have shewn that in all states, whether free or enslaved, the regulation of public affairs is, in some degree, influenced by public opinion, and that the most despotic princes are not free from its influence, either directly, or through their subordinate agents; it may be inferred, that the principles of the Italian statesmen are applicable, in some measure, to the movements of all independent communities; and that the external as well as internal affairs of states are the more steady, the more reducible to certain laws, the greater the number of men is, to whose management those affairs are entrusted,

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* Mirabeau, Monarchie Prussienne, tom. iv. p. 472. 4to. edit.

† Discorsi sopra la prima deco di T. Livio. Lib. i. cap. 29. 47. 58. and 59.

‡ Cap. lix. *Di quali confederationi ò lega a tri si priò più fidare, ò quella fatta con una Republica, ò di quella fatta con un principe.*

and the more extensive the circle is, whose opinion or will affects that management.

4. The relative interests of different nations are affected by various circumstances, either unalterable, or only slowly alterable, in their relative situation and domestic state. The knowledge and comparison of those circumstances forms the foundation of the science, the principles of which we are now considering; and it is very evident that this knowledge must be of as difficult acquisition as it is important and practically useful. For, in order to have a clear view of the foreign relations of any power, it is necessary to be acquainted with the circumstances, not only of that nation, but of all the rest which compose the European commonwealth; to learn accurately their political state; to investigate their national characters and habits; to consult minutely their statistical situation:—so intimately is the federal power (the *puissance federative* of the foreign politicians) blended with the internal force, and the relative position with the insulated state of any country. The temporary circumstances of the different powers deserve also to be considered in a practical point of view:—the court intrigues; leading characters of the military or political departments; and the distinguished men in the literary world. These make up in the great book of politics, what may be called the chapter of accidents; and it is a chapter which perpetually sets all the inferences and calculations of the other parts at defiance. Except this last head, and it is obvious that every other branch of the subject is general and reducible to fixed principles, the circumstances which we have enumerated are of a general and invariable nature, or they vary slowly and regularly, or according to certain laws, which it is the business of the political philosopher to ascertain. The last kind of circumstances which we mentioned, are, indeed, more irregular, and their disturbing force is not denied. But, in considering the effects of the former, we must lay out of view those deranging causes, as we demonstrate (in Dynamics) the properties of the mechanical powers, without taking into view the effects of friction, or the resistence of the medium in which the powers operate. In a practical point of view, those disturbing causes must be carefully weighed; and to investigate them, is the business of the lawgiver, the prince himself, his ministers of state, with his agents in diplomatic affairs: in a word, of the practical politician or statesmen; a character of distinguished rank in every country, filling at once the most dignified and difficult place which man can occupy, and very little deserving of those ill-tempered invectives which Dr. Smith has been pleased to heap upon it, in a fit of peevishness, not unnatural to one who had seen how very

seldom this great and important character has been adequately supported.*

That such disturbing causes do exist to affect the foreign relations of every state, is no more an argument against the science of which we are treating, than the undoubted existence and effects of causes exactly similar in the domestic policy of states is a reason for denying (what no one now thinks of doubting) that the principles of government are reducible to a general and certain science. The degree of vigour inherent in any form of government—the freedom enjoyed by the people—the influence of the privileged orders upon the great engine of the state—all these are liable to be affected every moment, and are actually affected by the characters of the leaders in the different departments of the constitution. Yet no one, since the days of Aristotle, has denied, that the doctrines of a monarchical, aristocratical and democratical government are reducible to certain general principles; and that the nature of government, in general, is a subject of scientific inquiry.

In fact, the foreign affairs of nations are much less apt to be influenced by accidental events, than is generally imagined. The death of a civil or military chief, who had supported the greatness of a state by the vigour and wisdom of his councils, or the glory of his arms, is seldom, if ever, a cause of great change in the relative importance of that country. Great men rise in certain circumstances; they are disciplined in particular schools; they train up successors for themselves; they are called forth by certain emergencies in public affairs. This is more particularly the case in great systems, either civil or military—in the extensive governments, or vast regular armies of modern times, all the operations of which are combined, and mutually dependent upon one another. As these can only be carried on by the united exertions of many persons of the same habits and cast of talents, their success must always depend on the union of men whose abilities and experience in their arts are extensive. If the general or the statesman fall, his place will be filled by some of those whose talents have assisted him in subordinate branches of employment; and the constant demand for merit in a certain department will generally excite men to apply their attention to the acquisition of the excellence so much wanted, and so splendidly rewarded. Great occasions draw into public life such men as

* Our readers will be amused with the little piece of ill-humour which this truly great man vents upon the statesman or politician, in the passage here alluded to. He calls him '*an insidious and crafty animal*;' forgetting, surely, that Cæsar, Cato, Demosthenes, Richelieu, and many others, who have made the world tremble at their names, or revere their memory, must be ranged in this very class.—Wealth of Nations, Book iv. chap. 2.

have long been labouring to fit themselves for their station; and new talents, new powers, frequently spring up in a man's mind, when he is placed in a situation of pre eminent difficulty and splendour sufficient to call them forth. The great object of every nation should be, to remove every impediment or check which may prevent such men from rising into the stations for which their natural or acquired faculties render them fit. Under a free government, the restrictions upon the rise of real merit are much fewer than under a despotism; and the chance of preferment is extended to a much wider circle. In those countries, then, much less consequence may be attached to the existence or to the loss of a particular man It is seldom that we meet with Fleurys, or Turgots, or Bernstorffs, or Hassans: but a Walpole, or a Pitt, is, happily for mankind, frequently reproduced in the course of an age. Thus the appearance of those illustrious characters, in whose hands the fates of nations are placed, is much less regulated by accident than is generally supposed, more especially in modern times and in free states It follows, that, even in that branch of foreign policy which we have denominated the chapter of accidents, some principles may be traced; and less is to be imputed to blind hazard than most men are at first apt to imagine. May we be allowed to hope that the time is approaching (not rapidly, or by violent changes, but slowly and quietly, like all those arrangements of nature which tend to the substantial improvement of the species), when the establishment of equal rights, and rational systems of regular government over the whole of Europe, shall diminish yet farther the consequences attached to the caprices and accidental fates of individuals, and shall reduce to complete order all the circumstances that affect the intercourse of nations; so as to subject their whole movements to certain general and invariable laws, to reduce every eccentricity of course, and to correct all accidental inequalities or alterations in the system.†

We have now finished the general observations which we purposed to premise upon the nature and first principles of the science, a practical treatise or application of which is now before us ‡ Before offering our particular remarks upon this work,

† The foregoing general conclusions are sanctioned by the high authority of our countryman Professor Stewart. Had he added the demonstration of a proposition, simply enunciated in his celebrated work on the Philosophy of the human Mind (chap. iv. sect. 8.) the above inquiry would have been rendered unnecessary.

‡ The foregoing remarks may appear to our readers unconnected with the particular works of *Segur* and *Favier*. But we must observe, that the Notes of Segur (the only new part of the publication) are from beginning to end a statement of the principles above refuted, viz.

we have yet to call our reader's attention to some of the propositions in which the doctrine of the balance of power is contained: we shall arrange them so as to exhibit a sketch of the nature of the work before us; though in a more general way, and upon a more comprehensive plan, than can be found in that treatise itself, which is principally deficient in fundamental principles and extensive views. We have, in the foregoing statements, insisted the more at large on the possibility of reducing the external policy of nations to certain general principles; because, besides the direct negation of this proposition by Mr. Hume and others, it has been very much the custom of inferior politicians, and of the common run of mankind, more particularly in Great Britain, to decry such speculations as vain and illusive; to hold them up as objects fit only for the pedantic statist of Germany and Holland; and to describe them as points that should be settled by the finical, and too often contemptible characters, who are generally the representatives of the greatest nations, and who have brought a sort of ridicule upon the very name of diplomacy. The gravest subject that can occupy the human mind (intimately connected indeed with our present inquiry, though not altogether of the same kind with it,) the *law of nations*, has been exposed to a similar contempt. Montesquieu himself, lawyer and historian as he was, has, with his usual passion for an epigram, grossly misrepresented a subject as important and refined as any in his own department of municipal jurisprudence. He seriously explains 'the foundation of international law,' by telling us, 'that the whole system is a set of obvious corollaries to a maxim in ethics —That in war nations should do as little injury, and in peace as much good to each other, as is consistent with their individual safety.' Without asking whether it is possible that the author of this witticism should ever have heard of the insults of flags, the precedence of states, nay the whole admitted causes of justifiable war, and admitting that all the parts of the system may be strained, so as to come under the general proposition; we may be allowed to remark with great deference to so high a name, that such observations are extremely useless and unsatisfactory, that we learn from this remark nothing which can

that in this branch of politics, all must be ascribed to the particular characters and fortunes of individuals. In fully examining this, we have, therefore, completely examined the leading doctrines of this work. It may be proper to add, that the work, of which Segur's edition is now before us, has excited more attention on the Continent than any political publication of the present day; and that it is studied by all statesmen, as a manuel of one very important branch of their science.

give the slightest hint of the nature of public law; that it is as instructive as if one ignorant of mathematics were to say, 'the whole of this troublesome science consists of obvious corollaries from a very easy axiom—whatever is, is.' In this manner might all science be simplified; and learners who knew what '*corollary*' was, might be charmed to hear that they had but one proposition to learn and remember, and that all the rest was '*corollary*' from it.

We trust that the remarks already stated will suffice to evince how mistaken are all such views of foreign policy or international law; that those sciences will appear strictly reducible to certain general principles, and leading to important applications; that those subjects will be found highly refined and delicate, and as fully deserving of minute investigation as any within the range of the human intellect. As we proceed, farther illustrations of these remarks will occur to set their truth in a still stronger point of view.

1. *Treaties* or *public pactions* are the solemn and authentic expressions of certain agreements, which the governments of friendly or neutral powers have entered into for their mutual advantage. In so far as refers to our present subject, they are chiefly of three kinds, *amicable, defensive, offensive and defensive.* The first are simple cessations of hostilities; the next are agreements of mutual assistance in case of attack from a third power; and the last are more strict unions of interest, for the accomplishment of certain objects mutually beneficial. The second are seldom pure and unmingled. Many treaties bear the name of defensive, which by secret articles or more commonly by mutual understanding, and not unfrequently by the express tenor of the stipulations, are strictly of the latter kind; and, in general, a paction *bona fide* defensive has a tendency to bring about one of the more intimate and effectual kind.

The monopolizing and jealous spirit of mercantile policy, in modern times, has added to the kinds of treaties just now mentioned, a fourth, known by the name of *commercial*; of which the object is, to settle a certain rate of trade between the high contracting parties; or (what comes to the same thing) to grant each other certain privileges of buying and selling, refused to other states. These treaties are in every case absurd; they are meant to restrain that which ought in its nature to be free, and to be regulated only by the unrestricted operations of private traders: they relate to subjects in which no government ought ever to concern itself: they are only tolerable, when their object is the abolition of restrictions formerly imposed by foolish rulers, or gradually arising from the prejudices of the people.

All treaties have been exposed to the invectives and sarcasms of those who do not duly appreciate the nature of the institution. They are bits of parchment, and may be torn; they are made by men of peace in their closets, and may be violated by soldiers in the field; they are deeds, by which states affect to bind themselves, while no court of public law exists, in which the party failing may be compelled to perform his part; they are intended to check the ambition of princes or commonwealths, but they are to be observed by those who feel the checks, and may in a moment throw them off. 'Give me,' said Prince Eugene, in the true spirit of these reasons—'Give me,' said the General, when he saw that his allies were slow to fulfil conventions made against their obvious interests, and refusing to gratify his ambition, against their own safety and beyond their means—'Give 'me a battalion of soldiers; they will do more than a thousand 'treaties.' If all states were ruled by general officers, this sentiment would indeed be accurately true. In that case, a corporal would be a much more important personage than a publicist or an ambassador; but he would also be more interesting than a municipal judge or jurisconsult; for all municipal law, as well as all public law, would yield to the truncheon and the bayonet.—The same sentiment would hold good, also, of all such treaties as those entered into about the time of Eugene, and those to which he evidently alludes—treaties evidently disadvantageous to one of the contracting parties, and wholly beneficial to the others. But it happens that in the present state of society, generals receive their commission to act, and their orders to desist, from men strongly interested in the preservation of pacific relations; in the maintenance of the national faith; in the existence of a public code, to which all parties may at all times appeal.

If, by such declamatory arguments, it is meant to demonstrate, that treaties will not of themselves be sufficient to maintain peace or alliances—to preserve the independence of states—to insure success in war—we must admit the position; for we certainly never imagined that an ambassador's seal and subscription communicated to the skin of a dead sheep the faculty of tranquillizing or rousing the public mind, levying armies, gaining battles, and taking towns. We would trust more to its powers in the hands of a drummer, than of a statesman, to produce those effects. But that such solemn conventions as lead to treaties, and such discussions as attend them in the nations contracting, such ratifications as finish them, such ideas of pledge and form as they are uniformly supposed to convey—that all these circumstances have a most powerful influence, we cannot conceive questionable by

any one acquainted with the history of man, or the nature of the human mind. Independent of the spirit, indeed, with which those conventions were made, the mere paction is but a bit of parchment. Independent of the spirit which extorted the Magna Charta and Habeas Corpus, those records of the freedom and spirit of our ancestors, would be most unavailing to the liberties of the present generation. Both the one and the other are conventional signs—legal modes of expressing a bargain—certain solemn acts, the performance of which intimates to the world that certain intentions were perfected in the minds of the parties at the time—certain deeds, leaving a record which may refresh the memory of the parties, and to which the party fulfilling may appeal. Neither the treaties of Westphalia (now, unhappily, a matter of history,) nor the Magna Charta, can be enforced directly by the mandate of any human Court, superior to both parties. If the circumstances which gave rise to them were materially altered, they would both become obsolete; as, indeed, the former has already become. While no material change takes place, they stand on record before the whole world, to animate the parties contracting—to check them in their conduct on their honour and good faith—to shew the surrounding nations what compacts have been made—and to hold up to execration those that break them.

The foundation of the stability of every treaty is the mutual advantage of the parties. It is a just remark of the Florentine Secretary, that even after the most unequal contest, no peace between nations can ever be solid, by which one nation gains much more than the other. If the one gains much real good, and the other only obtains safety from total ruin, the peace will be broken, either by the former, as soon as her power is recruited enough to complete the work of conquest, or by the latter, as soon as she has breathed a little, and can hope to regain her lost ground. All such foolish treaties are rather conventions of truce than of peace. They were one great means of conquest used by the Romans: they are rendered less frequent in modern times, by the principles of the balancing system.

The observation of Machiavel may be extended to alliances in general between nations. The leagues, particularly those of a nature both offensive and defensive, have generally owed their instability to a necessary disunion of parties, arising from each possessing views radically incompatible with those of the others; views, properly speaking, secondary to the main object of the convention, but more interesting and more binding to the individual party, than any views of the common cause.

The remarks made above, apply to those subsidiary obligations entered into by nations not strictly concerned in the stipulations, in which the acceding powers guarantee the treaty, or bargain to support the party implementing against all infractions by the other. These are generally modified by the disposition of all parties at the time of the requisition to fulfil being made to the parties guarantees. They are the refinement of the modern system of interference.

2. The circumstances in the relative situation of the European powers—their proximity, their constant intercourse, their rivalry, and the uniform desire that all princes have to extend their dominions, render it absolutely necessary that no one power should view with indifference the domestic affairs of the rest, more particularly those affairs which have a reference to the increase or consolidation of national resources.

For the purpose of acquiring such information, the institution of ambassadors has been adopted, or of *privileged spies*, as they have been called by witty men, with much the same propriety of speech as would mark the personage who should be pleased to call Generals master-butchers, or Judges hangmen. From the institution of ambassadors, an essential and peculiar part of the modern system, have resulted the important consequences—a constant intercourse between the two governments; frequent opportunities of detecting and preventing hostile measures or artifices; and still more frequent occasions of avoiding ruptures, by timely complaint, and explanation or redress. The natural effects of the system to which this matter has been reduced, are certainly the prevention of wars, and the systematizing of the grand art of pacification.

The relative influence of the national changes that happen in one part of Europe, upon the proceedings of the other parts, might be illustrated by a variety of facts from modern history. That influence seems to be founded on natural circumstances, and wholly independent of all theory or system. Thus, to take an obvious instance—As soon as the grand improvement of standing armies had been introduced into Europe, it was extended in France, by the ambition of the King, to the keeping of large forces always in pay; and this example was followed by the neighbouring states, not as an useful invention of policy, of securing the prince's power, but as a measure necessary for the safety of nations exposed to the new power with which this change armed the French King. A circumstance not so obvious, in the history of the formation of most of the European states, presents an illustration, equally striking, of the principle which we have stated. There can be no doubt, that the consolidation of

the smaller dynasties into which the different empires were once divided, took place, in all, about the same period. The united empire of the Franks under Charlemagne was too formidable a neighbour to the heterogeneous masses of divided power which were then presented on all sides—by Britain, Spain, Italy, and the Northern Kingdoms. Accordingly, we find, that in the space of little more than half a century, all the great unions took place, of which the present nations of Europe are composed. The empire of Charlemagne was completed at the end of the eighth century; the Saxon Heptarchy was united under Egbert, first King of England, in 827; the Picts and Scots, by Kenneth II. first King of Scotland, 838; the Norwegian petty lordships into one kingdom, by Harold Harfager, in 875; and the crowns of Castile and Leon, under one King of Spain, nearly about the same period. The more contiguous of those states were consolidated at the very same time; the rest within a few years afterwards.

The right of national interference (a late refinement of this right of proportional improvement) has, like all other valuable and sacred principles, been called in question. It has been denied, that the total overthrow of all regular government in the greatest nation of Europe; the abolition of every salutary restraint upon the operations of the multitude; the erection of a standard to which every thing rebellious and unprincipled might repair; the open avowal of anarchy, atheism, and oppression, as a public creed:—it has been denied, that the existence of this grand nuisance gave the vicinage (to use Mr. Burke's apposite illustration) a right to interfere. Yet it is difficult to conceive what national changes, except the introduction of the pestilence, could give a better right to the neighbourhood to reject all intercourse with so infected a mass as France then was. And, if such defensive measures were absolutely necessary, it is evident, that the slightest aggression on the part of this neighbour justified that open war, which was so loudly prescribed by the slightest chance of its leading to a restoration of order. The immense acquisition of power which the French government acquired by the revolution; the general levy and arming that immediately took place—would have justified all neighbours in extending their resources upon the common principles of the modern system. Now, if this increase of French power had taken place on the Spanish, instead of the North side of the Pyrennees; if it had been, not a sudden augmentation of internal resources, but an increase of territory and power by conquest—no one doubts the propriety of an immediate interference; nay, if this increase had only been in contemplation, no one would hesitate to consider the formation of the plan as sufficient cause for war:—So thought our forefathers at least, when they

attacked Lewis XIV. a hundred years ago. But what difference is there as to foreign states, whether such an augmentation of power takes place at the expense of the Spanish, the Bourbons, or at the cost of the other branch of that illustrious house? whether this sudden change in the aspect of one powerful rival neighbour is the consequence of her foreign conquests, or of her rapid internal changes? whether the addition is drawn from the pillaged provinces of Spain, or the overthrow of all the peaceful institutions, and the plunder of all the wealthy orders at home? When such a sudden and prodigious increase of resources takes place in one country, as can only be matched by a similar revolution developing equal powers in the neighbouring nations, those neighbours are exactly in this dilemma,— either they must wade through all manner of turbulence and danger, to the sudden possession of resources sufficient to balance this new power; or they must submit to this new power. One mode of escape only remains from alternatives equally cruel; they may unite against this common nuisance; they may interfere, and abate it. If France had conquered the kingdoms of Leon and Castile, who doubts that Britain and Austria might have attacked her, though neither of them were friends of Spain? But this was not absolutely necessary; for, first, they might have perhaps saved themselves by defensive alliance, and the peaceable improvement of their internal resources; or, secondly, they might certainly have acquired in Holland, or Denmark, or Spain itself, an extent of territory equal to that gained by France. But the former measure would have been dangerous; the latter both dangerous and unjust. In like manner, Britain and Austria might have met the crisis of their affairs, arising from the new and sudden acquisition of resources which France made at the revolution. First, they might have united defensively, as ancient allies, and worked all the while to improve their internal resources; or, secondly, they might have revolutionized, and followed the French example. The first however, of those plans would have been dangerous; the latter, both dangerous and unprincipled. One alternative remained;—a union against the heard-of nuisance.

We hesitate not, then, to lay it down as a principle, applicable to this extreme case, that, whenever a sudden and great change takes place in the internal structure of a state, dangerous in a high degree to all neighbours, they have a right to attempt, by hostile interference, the restoration of an order of things, safe to themselves; or, at least, to counterbalance, by active aggression, the new force suddenly acquired. If a highwaymen pulls out a pistol from his bosom, shall we wait till he loads and presents it, before we kill and disarm him? shall we not attack him with like

arms, if he displays such weapons, whether he takes them from his own stores, or seizes them from some other person in our sight?* We do not attack a neighbouring nation for plundering or conquering a third power, because we wish to avenge or redress the injury, but because we shall be ourselves affected by its consequences. Shall we be less injured by the same consequences, because the dangerous power of doing us mischief is developed from its recesses within, and not forcibly snatched from without?

That such a principle as we have now been considering, is liable to limitations, we do not deny: it is indeed only applicable to extreme cases. No one would think of asserting the right of interference to be applicable in the case of gradual improvement, however great, in any nation; nor in the case of that more sudden amelioration which national resources may receive from the operation of a salutary reform—or a useful law—or a beneficial change of rulers. We only think the right competent in cases of sudden and great aggrandizement, such as that of France in 1790; and then, we maintain, that, if it endangers the safety of the neighbouring powers, no manner of importance should be attached to the nature of those circumstances from whence the danger has originated. Indeed we suspect that the essential, though not always avowed principles of modern policy, would bear us out in a wider interpretation of the proposition. We conceive, that many of the alliances of states, formed with a view to check the growing power of a common rival, and always ending in offensive measures, have been formed without any pretext of violence having actually been committed by the dreaded power, or being apprehended from that quarter; and without any consideration whatever of the source from whence this dangerous strength has been derived, whether from external acquisitions (the most common case) or from the sudden development of internal resources, or from the gradual increase of national strength, while neighbouring states were more slowly increasing or were losing force. This increase it is—this comparative strength, which excites the salutary jealousy of modern councils towards neighbouring powers. The pretexts, indeed, for war have been various; but the cause of such wars has generally been the same: the pretext has been adopted in conformity to ancient usage or prejudices, or to humour the feelings of the multitude, and cause them to take part, by working on their passions, much more powerfully than if the real cause were stated. The great maxim has generally been,

* The doctrine of the balance of power as deduced by Vatell, from similar grounds. *Vide* Droit des Gens, Liv. iii. ch. 3. §. 44. et seq.

'*Obsta principiis*'—'*Veniente occurrite morbo.*' We recommend it as a general watchword to all nations placed in the European community—to those, more especially, who are neighbours of Prussia and France; above all we recommend it to the greater powers of Europe, the natural guardians of the great commonwealth; and to our country in particular, whose pre-eminent rank among them, gives her a title to interfere for others, as well as for her own immediate safety. To her we would address a language not unknown to her children in former times—the language of the balancing system.

'Tu regere imperio populos, Romane, memento;
Hæ tibi erunt artes; pacisque imponere morem,
Parcere subjectis, et debellare superbos.'

Virgil Æn.

3. It has been urged as a glaring inconsistency in a system which has for its professed object the preservation of peace, that, according to its principles and technical language, certain nations are denominated *natural enemies* and others *natural allies*. A little attention to the meaning of this proposition, will at once demonstrate the futility of the allegation, and lead us to one of the most general and fundamental doctrines of modern international policy. It is not meant by this phraseology to assert, that some nations ought always to view each other with suspicion and enmity. The intention of such a form of expression is merely to state a very general, and, unfortunately, an unquestionable fact in the history of the human species—that nations placed in certain circumstances are uniformly found to entertain towards each other sentiments of rivalry and animosity. The balancing system prescribes the means of disarming this bad principle in our nature of its destructive tendency, by teaching us to consider other nations as our natural friends, and by making the members of each class unite, so as to act systematically, with a view to the preservation of national peace. A few obvious considerations will shew what those principles are, and will lead us, by an easy transition, to the particular subject of the work now before us.

The circumstances which are uniformly found to constitute natural enmity between nations are threefold; *proximity* of situation, *similarity* of pursuits, and near *equality* of power. From the opposite causes arise the natural indifference or relative neutrality of states; a reasonable *distance, diversity* of objects, and considerable *inequality* of resources; while natural alliance results from the common enmity produced by a concurrence of the three causes first mentioned, in the relations of two or more powers towards the same third power.

But it may often happen that a state is involved in hostile relations with another of which it is not the natural enemy, either from being the accidental ally of a third power, primarily the enemy of this second; or from being natural ally to this third power, in consequence of their common relations of enmity towards some fourth or fifth power. Hence indeed arises the intricacy, if it has any, of the balancing system; and hence the multiplied relations of every one power with all the rest, so as to permit no one to remain for a moment an indifferent spectator of what is passing in the most remote parts of the European commonwealth. A few examples will illustrate the foregoing proposition. These illustrations contain the theory of what is called in practice the European balance. The work before us consists, almost entirely, of a treatise drawn up by the Sieur Favier, a confidential servant of Louis XIV. and Louis XV. upon the actual relations of the different powers at the commencement of the last unfortunate reign. The principles upon which all such treatises proceed we purpose at present briefly to sketch. The utility and application of such speculations may, like their object, be temporary and local; the principles are of all times and places—they are regular, fixed, and general.

In conformity to the proposition above enunciated, France is said to be the natural enemy of Great Britain. These states, separated by a narrow channel, are of sufficient relative strength to be mutually formidable; the one, by the extent and compactness of her territory, and by her large and useful population; the other, by her immense wealth, the defence afforded by her insular situation, and the myriads of her fleets which cover the ocean. They are both engaged in similar pursuits; because the circumstances of their situation are similar. The island, however is more adapted to commercial occupations, by the genius of her inhabitants, the nature of her produce, and the extent of her sea coast; from whence has resulted a habit of application to manufactures, navigation, and trade, and in consequence, superior skill in the arts, and greater extent of trading capital. The other country, eminent also in those points of view, is, however, so far inferior to the island, that her attention has for above a century, been constantly directed to emulate so valuable a superiority; while Britain finding herself deficient in direct power to sway the continental states of Europe, otherwise than by intrigue and gold, has returned France the compliment of attempting to beat, on her own element, the natural mistress of the European continent. From this reciprocal inferiority and consequent emulation, has arisen that spirit of rivalry, which will, it is to be feared, permanently alienate from each other, the two nations

most formed to love and esteem each other; best adapted to entertain close and profitable relations of commerce; and formed, by their union, to secure the lasting peace, and sway, uncontrolled, the sceptre of the civilized world. Unhappily the natural passions of the people, and the ambition of their rulers, have taught both to 'bear no brother near the throne;' to suffer no equal in trade, in arts, or in learning; and to divide, by their irreconcilable enmity, the other powers in the system, of which that enmity has become the corner stone.

Holland, from her proximity to Britain, her extensive commerce, and her splendid resources of national wealth, would have been our natural enemy, had France been out of the question. But as Holland lay still nearer to that ambitious power, with whose pursuits she interfered at least as much, besides the jealousy of her democratic government and Calvinistic religion, it became her interest to league with the enemies of her formidable neighbour. Accordingly, in all the wars of the two last centuries, Holland has been found on the side of England, with only two exceptions:—the impolitic contest of Charles II. when he was in the pay of France, and the jealous enmity of Holland in the end of the American war, as anomalous in Dutch politics, as the war of Charles had been in the history of Great Britain. After the peace of 1782, the breach was kept open, chiefly by the successes of the Republican power, until the year 1787; when, by one of the most skilful and successful interferences in continental affairs, which the balancing system has ever accomplished, the Stadtholder's power was restored, French influence destroyed, and the Dutch restored to their natural alliance with England.

The present alliance of the French and Batavian Republics is obviously no anomalous case: it is in every respect a subjection retained, as it was made, by the force of arms, and the influence of factious intrigue. The day is perhaps not distant, when even the slight appearances of national independence will be thrown off, and the absorption of the United Provinces into the modern empire of the Franks, be (shall we say?) the last great sacrifice to the sweeping principle of '*Arrondissement*,' one of the most signal inventions of the 18th century.

Next to France, the greatest power on the continent of Europe resides in the House of Austria, from the union of its hereditary dominions in Hungary, Bohemia, Austria, the frontier provinces, and the late acquisitions in Poland and the Venetian territories, with the Imperial crown, which confers an authority chiefly of indirect influence, over the princes of the empire. The hereditary losses of this power in the late war, have, on the whole, been trifling; but she has lost much in the power of swaying the

affairs of Italy, much of her influence in the Germanic affairs, and still more of relative force, by the astonishing increase of France, and the augmentation also of Prussia (her natural rival in Germany), to one or other of whom, or their dependents, have accrued all that Austria has lost. After all, the Austrian power is great and formidable. It would be the greatest and most formidable in Europe, were its extensive territories somewhat more compact, so as to derive full advantage from their central position; were it to acquire a small addition of sea coast in the Adriatic, so as to have easier vent for its numerous and costly products in the foreign markets; were its vast resources called forth and wielded by a better formed government, or a wiser race of statesmen, so as to take every advantage of the finest climates, richest mountains, most fertile valleys, and greatest variety of hardy subjects; and, more especially, were its armies, the first in the world, organized upon a better plan, so as to place at their head younger leaders: Were these advantages (the most of which may be acquired) added to its immense natural resources, Austria might be deemed the first power in Europe, and dreaded by all her neighbours as resistless in the scale.

The circumstance which render Austria the natural enemy and counterpoise of France, render her also the natural ally of Britain—the great continental support of British influence. In proportion to the enmity between those leading powers, this natural union between Britain and Austria has always been more or less close, since the separation of the Spanish from the Austrian branch of the house. It has experienced only one remarkable intermission, and that a slight one, during the peace-loving administrations of Fleuri and Walpole. In the war which succeeded the fall of Walpole's ministry, France siding with the Bavarian Emperor, England naturally took the part of the Empress-Queen, at that time almost crushed by the union of her enemies. The singular alliance of 1756, the *chef-d'œuvre* of Kaunitz, and, according to the French politicians, the greatest error France ever committed, deranged, for a while, the natural relations of the continental powers. Britain was not thrown out of amity with Austria; but Austria, ceasing to be the enemy of France, ceased also to be the ally of Britain. Yet still it is worthy of remark, that the assistance given by us to Prussia, during the seven years war, in consequence of France siding against Frederic II.* was pointed, not against Austria or Russia, his two most formidable

* *Vide* Hist. de la Guerre de Sept-ans, vol. i. cap. 1. where that Prince himself details the reasons that induced him to undertake the war. One was, the certainty of both England and France *not* taking the same side; whence, he could count on the assistance of one of those powers.

chemies, by checking whom he could at once have saved him; but against our own natural enemy alone, to our desire of opposing whom, Prussia owed the aid she received from us.

The chief part of the '*Politique de tous les Cabinets*,' is occupied with a treatise of the Sieur Favier on the Foreign Relations of France, evidently drawn up with a view to decry the policy of 1756, which dictated the Austrian alliance, and to shew the necessity under which France laboured of increasing her military as well as federal power (*sa puissance tant militaire que federative*), in order to regain the rank of a primary power, said to have been lost through the consequences of the Austrian alliance, and the seven years war. This treatise (with a few others, chiefly short excerpts from the memorials of Vergennes, Broglio, Turgot, and other French ministers) was first published in 1793, by authority of the legislature; and, after attracting so great attention over all Europe, as to be deemed the best popular manual of young diplomatists and politicians, it is now republished with a few additions, and with large notes, of considerable value, by the editor, M. Segur, formerly an eminent diplomatic character in the service of the French Court. The theory of M. Segur is precisely the reverse of Favier's. He approves of the Austrian alliance, and condemns only the misconduct that marked the management of both the civil and military administration of France, after the treaty of Vienna had sealed and perfected the new federal system.

Favier, adopting the opinion since universally received, attributes to the treaty 1756, and the consequent military operations of France during the seven years war, not only the immediate loss of men and money at that crisis, all for the benefit of Austria, without any good to the concerns of France, but also the subsequent aggrandizement of the Austrian House, already too powerful by the exhaustion of Prussia, and the valuable acquisition of Poland, the natural ally of France, and scene of French influence, whose destruction he hesitates not to impute to the Austrian system. Segur, on the other hand, without denying the losses experienced by France during the war, and the still greater evils arising to her from the Polish catastrophe, ascribes those consequences to the mal-administration of French affairs in the seven years war, and in the whole interval between the peace of Hubertsburg and the Revolution. He maintains, that the wisest policy which France could possibly have adopted, was, the securing of a long peace by an alliance with her natural enemy. He argues this point upon much the same grounds as those chosen by the defenders of Walpole and Fleuri; and he contends, that no danger whatever could have arisen to France from the alliance of 1756, if the administration of her domestic affairs had been as

wise and energetic as the management of her foreign relations at that æra. As Favier perpetually recurs to the same text, endeavouring, like all theorists, to reduce every thing under one head, and twisting all facts to humour his main position, so the new editor follows him through his whole course, and, under the head of each power whose relations to France are discussed by Favier in the text, we meet with a separate argument in Segur's notes, tending either to modify or overthrow the favourite conclusions of the former politician.

It appears to us (although we cannot afford room for the discussion) that the doctrine of Favier, with a few limitations, is by far the soundest. All the benefits of repose would have been gained by France, although she had never entered into the defensive treaty of 1756, or the subsequent conventions of 1756 and 1757. The chance of France being attacked was chimerical. By whom, but Austria or England could she possibly be annoyed? If by the former, of course the defensive treaty was absurd; if by the latter, clearly, Austria could never assist her; since the British forces would only attack by sea, or by a littoral warfare, or in the American and East Indian colonies. But Austria was liable to attack from that power which had despoiled her of her finest provinces a few years before. Besides, the object of the treaty turned out to be (according to the remarks on conventions which we formerly made) not defensive, but offensive. France was, in fact, to assist Austria with 24,000 men to recover Silesia and humble the House of Brandenburg, or dismember its dominions. After the war broke out, the stipulation was forgotten; that is, the terms were changed, as is very commonly the case; and, instead of 24,000, France sent 100,000 men, to be defeated by the British and Prussian armies. How could she possibly gain by such an object, though completely successful in attaining it? She was fighting for Austria conquering for her profit, and, if defeated, sharing her losses. We object also to the general spirit of Segur's reasonings. He always denies the possibility of drawing certain conclusions upon such matters; and, in the true spirit of an old diplomatist and courtier, he advises us to look more to the peculiarities of human character, and personal or accidental considerations, than to the *criteria* more philosophically appealed to by Favier. We have formerly treated at large of this matter, and have endeavoured to refute doctrines proceeding from so partial and erroneous a view of the subject. We ought to remark, however, that Segur is by no means so ignorant of political philosophy, as we might expect from this specimen, and from the nature of his former pursuits. We find him decidedly rejecting, as absurd, the narrow notions of mercantile policy, which dictate commercial treaties, although he was himself successful in the negociation of a very celebrated one, the foundation of his fame in the diplomatic world. We return to our general sketch.

The vicinity of Spain to France, their distance from the rest of Europe, and the compactness of their territories, which renders them, as it were, parts of one great peninsula, might have rendered them natural enemies, had not Holland and Britain been situated in much the same predicament, with respect to France, on the north. Besides, the insulated position of Spain, joined to her great inferiority of strength, from political and moral causes, makes her naturally dependent on her powerful neighbour. But, above all, the separation of the Spanish from the Imperial crown and the Austrian dominions, and the consequent disputes between the Courts of Vienna and Madrid, about the dominion of Italy, have thrown Spain into the arms of the natural enemy of the House of Austria. We do not enumerate, among these causes, the family compact which so closely united the two branches of the House of Bourbon, or the blood relationship which was the cause of that convention. Those circumstances may have drawn closer the natural ties of alliance between France and Spain; but still they are to be viewed as accidental and subordinate. If it was the evident interest of Spain to depend on France, and of France to rule over Spain, the death or marriage of one of the reigning branches could never for a moment have prevented the union of the nations. The last will of Charles II. indeed, set all Europe in arms to fight down this formidable union. But does any one imagine, that had Alberoni succeeded in stealing this document, the other powers would have shut their eyes on the strides which Louis was making to obtain dominion over Europe, by playing off Spain against Austria? Or, had the combined enemies of that ambitious prince been prudent enough to accept of the terms extorted by his humiliation, and terminated the grand alliance-war at Gertruydenberg, can any one suppose, that the union of the two natural allies, thus apparently broken (for Louis's offers went to this length), would have subsisted less close and compact at the next crisis of European affairs?

To such as believe that all great events depend more on chance than principle, and despise all general reasonings on the train of human affairs, we would recommend two obvious considerations: Did the alliance of 1756 maintain indissoluble the unnatural union of the two powers? Or, has the dissolution, with every cruel aggravation, of the marriage which had been intended to cement that temporary alliance, prevented peace and seeming amity from subsisting between the murderers and the nearest blood relations of the ill-fated Antoinette? Has not one of the various means tried by Spain to regain that power over her feeble neighbour, which the Bragança revolution (1640) overthrew, consisted in always endeavouring to have a Spanish princess on the Portuguese throne? And yet, has that prevented her from seconding

her policy by open force, and attacking the throne which she had immediately before filled with her royal offspring? Or, to come still nearer the present discussion, was not the family compact dissolved in 1793, under circumstances of complicated insult and violence to every branch of the House of Bourbon, as well as of imminent danger to the most despotic and bigoted government in the West of Europe? And have the ancient politics of the Spanish cabinet varied one jot, in consequence of all those personal considerations, and grand occurrences? No. After a few months of languid co-operation with the combined powers (from the expectation of crushing the infant Republic), as soon as Spain saw that the new State could stand alone against foreign attacks, and had some chance of surviving the revolutionary storms, she instantly returned to her natural policy, and resumed her alliance with France; that is to say, she resigned all her family regards, the consequences of which had once alarmed all Europe? sacrificed much of her trade, exposed her sea-coast to the troops and fleets of England, risked and lost her fleets by fighting the battles of France, and put the very existence of her weak-handed government to the severest trial, by a free intercourse with republicans and regicides—by acknowledging and receiving into her capital a Jacobin emissary with his crew. In a word, the Spanish branch of the Bourbon line is as closely united, or rather as submissively dependent on the usurper of that throne, which the sister branch once filled, as ever it was during the proudest days of the French monarchy—during the reign of the Bourbons, the Virtues, and the Elegant Arts. In return for his homage, the haughty sovereign of the two Indies is pleased to receive for his son, from the Corsican Adventurer, a crown patched up of the Italian spoils, taken from the natural enemy of Spain. The service performed, and the boon granted, are equally illustrative of our general principles.

We might now proceed to trace the relations between Portugal and Britain on the one hand, or its connexion with France and Spain on the other; between the Italian States and the Transalpine Powers to the right and left of the Rhine; between the Porte and Russia; or the Porte and Britain, or France; the connexions between the three powers surrounding the ancient and dismembered kingdom of Poland; the relations of the Northern Crowns; the relations of the different powers possessed of colonies in the East or West Indies, both with the native states, and with each other, in consequence of their colonial possessions. All these juntos of states form separate assemblages of particular interests; smaller systems, influenced internally by the same principles, and connected by the same law with the general mass of the European community. We have, however, said enough

to shew, that, in practice, as well as from theoretical considerations, this important subject is capable of being reduced to systematic arrangement, and to fixed general principles. And we have only to conclude with repeating, in a form somewhat different, the proposition which at the outset we proposed to demonstrate.

It appears, that by the modern system of foreign policy, the fate of nations has been rendered more certain; and the influence of chance, of the fortune of war, of the caprices of individuals upon the general affairs of men, has been infinitely diminished. Nations are no longer of transient or durable existence in proportion to their internal resources, but in proportion to the place which they occupy in a vast and regular system; where the most powerful states are, for their own sakes, constantly watching over the safety of the most insignificant. A flourishing commonwealth is not liable to lose its independence or its prosperity by the fate of one battle. Many battles must be lost; many changes must concur: the whole system must be deranged, before such a catastrophe can happen. The appearance of an Epaminondas can no longer raise a petty state to power and influence over its neighbour, suddenly to be lost, with the great man's life, by some unforeseen victory at Leuctra. In the progress of freedom, knowledge, and national intercourse, this great change has been happily effected by slow degrees; it is a change which immediately realizes the advantages that every former change has gained to mankind; a step in his progress, which secures the advancement made during all his previous career; and contributes, perhaps more than any other revolution that has happened since the invention of written language, to the improvement and magnificence of the species.

Let statesmen, then, reflect on these things; and, in the present awful crisis of affairs, let them often ponder upon the principles which should direct their public conduct. Without neglecting the increase of their internal resources, by wise regulations, and gradual improvements of the civil and military constitution of the countries intrusted to their care, let them constantly look *from* home, and remember that each state forms a part of the general system, liable to be affected by every derangement which it may experience; and, of necessity, obliged to trust for its safety to a concurrence of other causes besides those which domestic policy can control. '*Non arma neque thesauri regni præsidia sunt, verum amici: quos neque armis cogere, neque auro parare queas; officio et fide pariuntur.*' Sal. Jugurth.

ART. X. *Dernieres Vuës de Politiques, et de Finance.* Par M. Neckar. An. 10. 1802.

IF power could be measured by territory, or counted by population, the inveteracy, and the disproportion which exists between France and England, must occasion to every friend of the latter country, the most serious and well founded apprehensions. Fortunately however for us, the question of power is not only what is the amount of population? but, how is that population governed? How far is a confidence in the *stability* of political institutions established by an experience of their *wisdom*? Are the various interests of society adjusted and protected by a system of laws thoroughly tried, gradually ameliorated, and purely administered? What is the degree of general prosperity evinced by that most perfect of all *criteria*, general credit? These are the considerations to which an enlightened politician, who speculates on the future destiny of nations, will direct his attention, more than to the august and imposing exterior of territorial dominion, or to those brilliant moments, when a nation under the influence of great passions, rises above its neighbours, and above itself, in military renown.

If it be visionary to suppose the grandeur and safety of the two nations as compatible and coexistent, we have the important (though the cruel consolation) of reflecting, that the French have yet to put together the very elements of a civil and political constitution, that they have to experience all the danger and all the inconvenience which results from the rashness and the imperfect views of legislators, who have every thing to conjecture, and every thing to create; that they must submit to the confusion of repeated change, or the greater evil of obstinate perseverance in error; that they must live for a century in that state of perilous uncertainty in which every revolutionized nation remains, before rational liberty becomes feeling and habit, as well as law, and is written in the hearts of men as plainly as in the letter of the statute; and that the opportunity of beginning this immense edifice of human happiness, is so far from being presented to them at present, that it is extremely problematical, whether or not they are to be bandied from one vulgar usurper to another, and remain for a century subjugated to the rigour of a military government, at once the scorn and the scourge of Europe.

To the more pleasing supposition, that the First Consul, will make use of his power to give his country a free constitution we are indebted for the work of M. Neckar now before us; a work of which good temper is the characteristic excellence; it every where preserves that cool impartiality which it is so difficult to

retain in the discussion of subjects connected with recent and important events; modestly proposes the results of reflection; and, neither deceived nor wearied by the theories, examines the best of all that mankind have said or done for the attainment of rational liberty.

The principal object of M. Neckar's book is to examine this question: 'An opportunity of election supposed, and her present circumstances considered—what is the best form of government which France is capable of receiving?' and he answers his own query, by giving the preference to a Republic, One and Indivisible.

The work is divided into four parts,

1. An examination of the present constitution of France.
2. On the best form of a Republic, One and Indivisible.
3. On the best form of a Monarchical Government.
4. Thoughts upon Finance.

From the misfortune which has hitherto attended all discussions of *present* constitutions in France, M. Neckar has not escaped. The subject has proved too rapid for the author; and its existence ceased, before its properties were examined. This part of the work, therefore, we shall entirely pass over: because, to discuss a mere name, is an idle waste of time; and no man pretends that the present constitution of France can, with propriety be considered as any thing more. We shall proceed to a description of that form of a republican government which appears to M. Neckar best calculated to promote the happiness of that country.

Every department is to be divided into five parts, each of which is to send one member. Upon the eve of an election, all persons paying 200 livres of government taxes, in direct contribution, are to assemble together, and choose 100 members from their own number, who form what M. Necker calls a Chamber of Indication. This Chamber of Indication is to present five candidates, of whom the people are to elect one; and the right of voting in this latter election is given to every body engaged in a wholesale or retail business; to all superintendants of manufactures and trades; to all commissioned and non-commissioned officers and soldiers who have received their discharge; and to all citizens paying, in direct contribution, to the amount of twelve livres. Votes are not to be given in one spot, but before the chief magistrate of each *commune* where the voter resides, and there inserted in registers: from a comparison of which, the successful candidate is to be determined. The municipal officers are to enjoy the right of *recommending* one of these candidates to the people, who are free to adopt their recommendation, or not, as they may think proper. The right of voting is confined to qualified

single men at twenty-five years of age: married men, of the same description, may vote at any age."

To this plan of election, we cannot help thinking there are many great and insuperable objections. The first and infallible consequence of it would be, a devolution of the whole elective franchise to the chamber of indication, and a complete exclusion of the people from any share in the privilege; for the chamber bound to return five candidates, would take care to return four out of the five so thoroughly objectionable, that the people would be compelled to choose the fifth. Such has been the constant effect of all elections so constituted in Great Britain, where the power of conferring the office has always been found to be vested in those who named the candidates, not in those who selected an individual from the candidates so named.

But if such were not the consequences of a double election; and if it were so well constituted, as to retain that character which the Legislature meant to impress upon it, there are other reasons which would induce us to pronounce it a very pernicious institution. The only foundation of political liberty is the spirit of the people; and the only circumstance which makes a lively impression upon their senses, and powerfully reminds them of their importance, their power, and their rights, is the periodical choice of their representatives. How easily that spirit may be totally extinguished, and of the degree of abject fear and slavery to which the human race may be reduced for ages, every man of reflection is sufficiently aware; and he knows that the preservation of that feeling is of all other objects of political science the most delicate, and the most difficult. It appears to us, that a people who did not choose their representatives, but only those who chose their representatives, would very soon become indifferent to their elections altogether. To deprive them of their power of nominating their own candidate, would be still worse. The eagerness of the people to vote, is kept alive by their occasional expulsion of a candidate who has rendered himself objectionable, or the adoption of one who knows how to render himself agreeable to them. They are proud of being solicited *personally*, by a man of family or wealth. Even the uproar, and the confusion and the clamour of a popular election in England, have their use: they give a stamp to the names, *Liberty, Constitution, and People*, they infuse sentiments which nothing but violent passions, and gross objects of sense *could* infuse; and which would never exist, perhaps, if the sober constituents were to sneak, one by one, into a notary's office to deliver their votes for a representative, or were to form the first link in that long chain of causes and effects, which, in this compound kind of elections, ends with choosing a member of Parliament.

"Above all things (says M. Neckar), languor is the most deadly to a republican government; for when such a political association is animated, neither by a kind of instinctive affection for its beauty, nor by the continual homage of reflection to the happy union of order and liberty, the public spirit is half lost, and with it the republic. The rapid brilliancy of despotism is preferred to a mere complicated machine, from which every symptom of life and organization is fled.

Sickness, absence, and nonage, would (even under the supposition of universal suffrage) reduce the voters of any country to one fourth of its population. A qualification much lower than that of the payment of twelve livres in direct contribution, would reduce that fourth one half, and leave the number of voters in France three millions and a half, which divided by 600, gives between five and six thousand constituents for each representative; a number not amounting to a third part of the voters for many counties in England, and which certainly is not so unwieldy, as to make it necessary to have recourse to the complex mechanism of double elections. Besides, too, if it could be believed, that the peril were considerable, of gathering men together in such masses, we have no hesitation in saying, that it would be infinitely preferable to thin their numbers, by increasing the value of the qualification, than to obviate the apprehended bad effects, by complicating the system of election.

M. Neckar (much as he has seen and observed) is clearly deficient of that kind of experience which is gained by living under free governments: he mistakes the riots of a free, for the insurrection of an inslaved people; and appears to be impressed with the most tremendous notions of an English election. The difference is, that the tranquillity of an arbitrary government is rarely disturbed, but from the most serious provocations, not to be expiated by an ordinary vengeance. The excesses of a free people are less important, because their resentments are less serious; and they can commit a great deal of apparent disorder, with very little real mischief. An English mob, which, to a foreigner might, convey the belief of an impending massacre, is often contented by the demolition of a few windows.

The idea of diminishing the number of constituents, rather by extending the period of nonage to twenty-five years, than by increasing the value of the qualification, appears to us to be new and ingenious. No person considers himself as so completely deprived of a share in the government, who is to enjoy it when he becomes older, as he would do, were that privilege deferred till he became richer:—time comes to all, wealth to few.

This assembly of representatives, as M. Neckar has constituted it, appears to us to be in extreme danger of turning out to be a mere collection of country gentlemen. Every thing is determined

by territorial extent and population; and as the voters in towns must, in any single division, be almost always inferior to the country voters, the candidates will be returned in virtue of large landed property; and that infinite advantage which is derived to a popular assembly, from the *variety* of characters of which it is composed, be entirely lost under the system of M. Neckar. The sea ports, the universities, the great commercial towns, should all have their separate organs in the parliament of a great country. There should be some means of bringing in active, able, young men, who would submit to the labour of business, from the stimulous of honour and wealth. Others should be there, expressly to speak the sentiments, and defend the interests of the executive. Every popular assembly must be grossly imperfect, that is not composed of such heterogeneous materials as these. Our own Parliament may perhaps contain within itself *too many* of that species of representatives, who could never have arrived at the dignity, under a pure and perfect system of election; but, for all the practical purposes of government, amidst a great majority fairly elected by the people, we should always wish to see a certain number of the legislative body representing interests very distinct from those of the people.

The legislative part of this constitution, M. Neckar manages in the following manner. There are two councils; the great and the little. The great council is composed of five members from each department, elected in the manner we have just described, and amounting to the number of six hundred. The assembly is re-elected every five years. No qualification of property is necessary to its members, who receive each a salary of 12,000 livres. No one is eligible to the assembly before the age of twenty-five years. The little national council consists of one hundred members, or from that number to one hundred and twenty; one for each department. It is re-elected every ten years; its members must be thirty years of age; and they receive the same salary as the members of the great council. For the election of the little council, each of the five members of indication, in every department, gives in the name of one candidate: and, from the five so named, the same voters who choose the great council select one.

The municipal officers enjoy, in this election, the same right of *recommending* one of the candidates to the people; a privilege which they would certainly exercise indirectly, without a law, wherever they could exercise it with any effect, and the influence of which, the sanction of the law would at all times rather diminish, than increase.

The general national council commences all deliberations which concern public order, and the interest of the state, with the ex-

ception of those only which belong to finance. Nevertheless, the executive and the little council have it in their power to *propose* any law for the consideration of the grand council. When a law has passed the two councils, and received the sanction of the executive senate, it becomes binding upon the people. If the executive senate disapprove of any law represented to them for their adoption, they are to send it back to the two councils for their reconsideration; but if it passes these two bodies again, with the approbation of two-thirds of the members of each assembly, the executive has no longer the power of withholding its assent. All measures of finance are to initiate with government.

We believe M. Neckar to be right in his idea of not exacting any qualification of property in his legislative assemblies. When men are left to choose their own governors, they are guided in their choice by some one of those motives which has always commanded their homage and admiration:—if they do not choose wealth, they choose birth or talents, or military fame; and of all these species of pre-eminence, a large popular assembly should be constituted. In England, the laws, requiring that members of Parliament should be possessed of certain property, are (except in the instance of members for counties) *practically* repealed.

In the salaries of the members of the two councils, with the exception of the expense, there is, perhaps, no great balance of good or harm. To some men, it would be an inducement to become senators; to others, induced by more honourable motives, it would afford the means of supporting that situation without disgrace. Twenty-five years of age is certainly too late a period for the members of the great council. Of what astonishing displays of eloquence and talent should we have been deprived in this country, under the adoption of a similar rule?

The institution of two assemblies constitutes a check upon the passion and precipitation by which the resolutions of any single popular assembly may occasionally be governed. The chances, that one will correct the other, do not depend solely upon their dividuality, but upon the different ingredients of which they are composed, and that difference of system and spirit, which results from a difference of conformation. Perhaps M. Neckar has not sufficiently attended to this consideration. The difference between his two assemblies is not very material; and the same popular fury which marked the proceedings of one, would not be very sure of meeting with an adequate corrective in the dignified coolness and wholesome gravity of the other.

All power which is tacitly allowed to devolve to the executive part of a government, from the experience that is most conveniently placed there, is both safer, and less likely to be complained of, than that which is conferred upon it by law. If M.

Neckar had placed some agents of the executive in the great council, all measures of finance would, *in fact*, have originated in them, without any exclusive right of such initiation; but the *right* of initiation, from M. Neckar's contrivance, is likely to excite that discontent in the people, which alone can render it dangerous and objectionable.

In this plan of a republic, every thing seems to depend upon the purity and the moderation of its governors. The executive has no connection with the great council; the members of the great council have no motive of hope, or interest, to consult the wishes of the executive. The assembly which is to give example to the nation, and enjoy its confidence, is composed of six hundred men, whose passions have no other control, than that pure love of the public, which it is *hoped* they may possess, and that cool investigation of interests, which it is *hoped* they may pursue.

Of the effects of such a constitution, every thing must be conjectured; for experience enables us to make no assertion respecting it. There is only one government in the modern world, which, from the effects it has produced, and the time it has endured, can with justice be called good and free. Its constitution, in books, contains the description of a legislative assembly, similar to that of M. Neckar's. Happily, perhaps, for the people, the share they have *really* enjoyed in its election, is much less ample than that allotted them in this republic of the closet. How long a really popular assembly would tolerate any rival and coexisting power in the state—for what period the feeble executive and the untitled, unblazoned peers of a republic, could stand against it—whether any institutions, compatible with the essence and meaning of a republic, could prevent it from absorbing all the dignity, the popularity, and the power of the state;—are questions that we leave for the resolution of wiser heads with the sincerest joy, that we have only a theoretical interest in stating them.

The executive senate is to consist of seven; and the right of presenting the candidates, and selecting *from* the candidates alternately from one assembly to the other, *i. e.* on a vacancy, the great council present three candidates to the little council, who select one from that number; and, on the next vacancy, by the inversion of this process, the little council present, and the great council select, and so alternates. The members of the executive must be thirty five years of age. Their measures are determined by a majority. The president, called the Consul, has a casting vote: his salary is fixed at 300,000 livres; that of all the other senators at 60,000 livres. The office of consul is annual. Every senator enjoys it in his turn. Every year one senator goes out, unless re-

elected; which he may be once, and even twice, if he unites three fourths of the votes of each council in his favour The executive shall name to all civil and military offices, except to those of mayors and municipalities. Political negotiations, and connexions with foreign countries, fall under the direction of the executive. Declarations of war and peace, when presented by the executive to the legislative body, are to be adopted, the first by a majority of three fifths, the last by a simple majority. The parade, honours, and ceremonies of the executive, devolve upon the consul alone. The members of the senate, upon going out of office, become members of the little council, to the number of seven. Upon the vacation of an eighth senator, the oldest ex-senator in the little council resigns his seat to make room for him. All responsibility reats upon the consul alone, who has a right to stop the proceedings of a majority of the executive senate, by declaring them unconstitutional; and if the majority persevere, in spite of this declaration, the dispute is referred to and decided by a secret committee of the little council.

M. Neckar takes along with him the same mistake through the whole of his constitution, by conferring the choice of candidates on one body, and the election of the member on another: so that though the alternation would take place between the two councils, it would turn out to be in an order directly opposite to that which was intended.

We perfectly acquiesce in the reasons M. Neckar has alleged for the preference given to an executive, constituted of many individuals, rather than of one. The prize of supreme power is too tempting to admit of fair play in the game of ambition; and it is wise to lessen its value by dividing it: at least, it is wise to do so under a form of government that cannot admit the better expedient of rendering the executive hereditary; an expedient (gross and absurd as it seems to be) the best calculated, perhaps, to obviate the effects of ambition upon the stability of governments, by narrowing the field on which it acts, and the object for which it contends. The Americans have determined otherwise, and adopted an elective presidency: But there are innumerable circumstances, as M. Neckar very justly observes, which render the example of America inapplicable to other governments. America is a federative republic, and the extensive jurisdiction of the individual States exonerates the president from so great a portion of the cares of domestic government, that he may almost be considered as a mere minister of foreign affairs. America presents such an immediate, and such a seducing species of provision to all its inhabitants, that it has no idle discontented populace; its population amounts only to six millions, and it is not condensed in such masses as the popu-

lation of Europe. After all, an experiment of twenty years is never to be cited in politics: nothing can be built upon such a slender inference. Even if America were to remain stationary, she might find that she had presented too fascinating and irresistible an object to human ambition: of course, that peril is increased by every augmentation of a people, who are hastening on, with rapid and irresistible pace, to the highest eminencies of human grandeur. Some contest for power there must be in every free state: but the contest for vicarial and deputed power, as it implies the presence of a moderator and a master, is more prudent than the struggle for that which is original and supreme.

The difficulty of reconciling the responsibility of the executive with its dignity, M. Neckar foresees; and states, but does not remedy. An irresponsible executive, the jealousy of a republic would never tolerate; and its amenability to punishment by degrading it in the eyes of the people, diminishes its power.

All the leading features of *civil liberty* are copied from the constitution of this country, with hardly any variation.

Having thus finished his project of a republic, M. Neckar proposes the government of this country as the best model of a temperate and hereditary monarchy; pointing out such alterations in it as the genius of the French people, the particular circumstances in which they are placed, or the abuses which have crept into our policy, may require. From one or the other of these motives he re-establishes the salique law; forms his elections after the same manner as that previously described in his scheme of a republic; and excludes the clergy from the House of Peers. This latter assembly, M. Neckar composes of 250 hereditary peers chosen from the best families in France, and of 50 assistant peers enjoying that dignity for life only, and nominated by the Crown. The number of hereditary peers is limited as above, the peerage goes only in the male line, and upon each peer is perpetually entailed landed property to the amount of 30,000 livres. This partial creation of peers for life only, appears to remedy a very material defect in the English constitution. An hereditary legislative aristocracy not only adds to the dignity of the throne, and establishes that gradation of ranks which is perhaps absolutely necessary to its security, but it transacts a considerable share of the business of the nation, as well in the framing of laws as in the discharge of its juridical functions; but men of rank and wealth, though they are interested by splendid debate, will not submit to the drudgery of business, much less can they be supposed conversant in all the niceties of law questions. It is therefore necessary to add to their number a certain portion of *novi homines*, men of established character for talents, and upon whom the

previous tenor of their lives has necessarily impressed the habits of business. The evil of this is, that the title descends to their posterity without the talents and the utility that procured it; and the dignity of the peerage is impaired by the increase of its numbers: not only so, but as the peerage is the reward of military as well as the earnest of civil services; and as the annuity commonly granted with it is only for one or two lives, we are in some danger of seeing a race of nobles wholly dependent upon the Crown for their support, and sacrificing their political freedom to their necessities. These evils are effectually, as it should seem, obviated by the creation of a *certain number* of peers for life only; and the increase of power which it seems to give to the Crown, is very fairly counteracted by the exclusion of the episcopacy, and the limitation of the hereditary peerage. As the weight of business in the Upper House would principally devolve upon the created peers, and as they would hardly arrive at that dignity without having previously acquired great civil or military reputation, the consideration they would enjoy would be little inferior to that of the other part of the aristocracy. When the *noblesse* of nature are fairly opposed to the *noblesse* created by political institutions, there is little fear that the former should suffer by the comparison.

If the clergy are suffered to sit in the Lower House, the exclusion of the episcopacy from the Upper House is of less importance: but, in some part of the legislative bodies, the interests of the church ought unquestionably to be represented. This consideration M. Neckar wholly passes over.

Though this gentleman considers an hereditary monarchy as preferable in the abstract, he deems it impossible that such a government could be established in France, under her present circumstances, from the impracticability of establishing with it an hereditary aristocracy; because the property, and the force of opinion, which constituted their real power, is no more, and cannot be restored. Though we entirely agree with M. Neckar, that an hereditary aristocracy is a *necessary* part of temperate monarchy; and that the latter must exist upon the base of the former, or not at all—we are by no means converts to the very decided opinion he has expressed of the impossibility of restoring them both to France.

We are surprised that M. Neckar should attempt to build any strong argument upon the durability of opinions in nations that are about to undergo, or that have recently undergone great political changes. What opinion was there in favour of a republic in 1780? or against it in 1794? or what opinions is there now in favour of it in 1802? Is not the tide of opinions, at this moment, in France, setting back with a strength equal to its flow? and is there not reason to presume, that for some time to come,

their ancient institutions may be adored with as much fury as they were destroyed. If opinions can revive in favour of kings (and M. Neckar allows it may,) why not in favour of nobles? It is true their property is in the hands of other persons; and the whole of that species of proprietors will exert themselves to the utmost to prevent a restoration so pernicious to their interests. The obstacle is certainly of a very formidable nature.—But why this weight of property, so weak a weapon of defence to its *ancient*, should be deemed so irresistible in the hands of its *present* possessors, we are at a loss to conceive; unless, indeed, it be supposed that antiquity of possession diminishes the sense of right and the vigour of retention; and that men will struggle harder to keep what they have acquired only yesterday, than that which they have possessed, by themselves or their ancestors, for six centuries.

In France, the inferiority of the price of revolutionary lands, to others, is immense. Of the former species, church land is considerably dearer than the forfeited estates of emigrants. Whence the difference of price, but from the estimated difference of security? Can any fact display, more strongly, the state of public opinion with regard to the probability of a future restoration of these estates, either partial or total? and can any circumstance facilitate the execution of such a project, more than the general belief that it will be executed? M. Neckar allows that the impediments to the formation of a republic are very serious; but thinks they would all yield to the talents and activity of Bonaparte, if he were to dedicate himself to the superintendance of such a government during the period of its infancy: of course, therefore, he is to suppose the same power dedicated to the formation of an hereditary monarchy; or his parallel of difficulties is unjust, and his preference irrational. Bonaparte could represent the person of a monarch, during his life, as well as he could represent the executive of a republic; and if he could overcome the turbulence of electors, to whom freedom was new, he could appease the jealousy that his generals would entertain of the returning nobles. Indeed, without such powerful intervention, this latter objection does not appear to us to be by any means insuperable. If the history of our own restoration were to be acted over again in France, and royalty and aristocracy brought back by the military successor of Bonaparte, it certainly could not be done without a very liberal distribution of favours among the great leaders of the army.

Jealousy of the executive is one feature of a republic, in consequence, that government is clogged with a multiplicity of safeguards and restrictions, which render it unfit for investigating complicated details, and managing extensive relations with vi-

gour, consistency, and dispatch. A republic, therefore, is better fit for a little state than a large one.

A love of equality is another very strong principle in a republic; therefore it does not tolerate hereditary honour or wealth; and all the effect produced upon the minds of the people by this factitious power is lost, and the government weakened: But, in proportion as the government is less able to command, the people should be more willing to obey; therefore a republic is better suited to a moral than an immoral people.

A people who have *recently* experienced great evils from the privileged orders and from monarchs, love republican forms so much, that the warmth of their inclination supplies, in some degree, the defect of their institutions. *Immediately*, therefore, upon the destruction of despotism, a republic *may be* preferable to a limited monarchy.

And yet, though narrowness of territory, purity of morals, and recent escape from despotism, appear to be the circumstances which most strongly recommend a republic, M. Neckar proposes it to the most numerous and the most profligate people in Europe, who are disgusted with the very name of liberty, from the incredible evils they have suffered in pursuit of it.

Whatever be the species of free government adopted by France, she can adopt none without the greatest peril. The miserable dilemma in which men living under bad governments are placed, is, that, without a radical revolution, they may never be able to gain liberty at all; and, with it, the attainment of liberty appears to be attended with almost insuperable difficulties. To call upon a nation, on a sudden, totally destitute of such knowledge and experience, to perform all the manifold functions of a free constitution, is to intrust valuable, delicate, and abstruse mechanism, to the rudest skill and the grossest ignorance. Public acts may confer liberty, but experience only can teach a people to use it; and, till they have gained that experience, they are liable to tumult, to jealousy, to collision of powers, and to every evil to which men are exposed, who are desirous of preserving a great good, without knowing how to set about it. In an old established system of liberty, like our own, the encroachments which one department of the state makes on any other, are slow, and hardly intentional: the political feelings, and the constitutional knowledge, which every Englishman possesses, creates a public voice, which tends to secure the tranquillity of the whole. Amid the crude sentiments and new-born precedents of sudden liberty, the Crown might destroy the Commons, or the Commons the Crown, almost before the people had formed any opinion of the nature of their contention. A nation grown free in a single day is a child born with the limbs and the vigour of a man, who

would take a drawn sword for his rattle, and set the house in a blaze, that he might chuckle over the splendour.

Why can factious eloquence produce such limited effects in this country? Partly because we are accustomed to it, and know how to appreciate it. We are acquainted with popular assemblies; and the language of our Parliament produces the effect it ought upon public opinion, because long experience enables us to conjecture the real motives by which men are actuated; to separate the vehemence of party spirit from the language of principle and truth; and to discover whom we can trust, and whom we cannot. The want of all this, and of much more than this, must retard, for a very long period, the practical enjoyment of liberty in France, and present very serious obstacles to her prosperity; obstacles little dreamed of by men who seem to measure the happiness and future grandeur of France, by degrees of longitude and latitude, and who believe she might acquire liberty with as much facility as she could acquire Switzerland or Naples.

M. Neckar's observations on the finances of France, and on finance in general, are useful, entertaining, and not above the capacity of every reader. France, he says, at the beginning of 1781, had 438 millions of revenue; and at present, 540 millions. The state paid, in 1781, about 215 millions in pensions, the interest of perpetual debts, and debts for life. It pays, at present, 80 millions in interests and pensions, and owes about 12 millions for anticipations on the public revenue. A considerable share of the increase of the revenue is raised upon the conquered countries; and the people are liberated from tithes, corvées, and the tax on salt. This, certainly, is a magnificent picture of finance. The best informed people at Paris, who would be very glad to consider it as a copy from life, dare not contend that it is so. At least, we sincerely ask pardon of M. Neckar, if our information as to this point be not correct: but we believe he is generally considered to have been misled by the public financial reports.

In addition to the obvious causes which keep the interest of money so high in France, M. Neckar states one, which we shall present to our readers—

'There is one means for the establishment of credit,' he says, 'equally important with the others which I have stated—a sentiment of respect for morals, sufficiently diffused to overawe the government, and intimidate it from treating with bad faith any solemn engagements contracted in the name of the state. *It is this respect for morals which seems at present to have disappeared*; a respect which the Revolution has destroyed, and which is unquestionably one of the firmest supports of national faith.

The terrorists of this country are so extremely alarmed at the

power of Bonaparte, that they ascribe to him resources, which M. Neckar very justly observes to be incompatible—despotism and credit. Now, clearly, if he is so omnipotent in France, as he is represented to be, there is an end of all credit; for nobody will trust *him* whom nobody can compel to pay; and if he establishes a credit, he loses all that temporary vigour which is derived from a revolutionary government. Either the despotism or the credit of France directed against this country, would be highly formidable; but, both together, can never be directed at the same time.

In this part of his work, M. Neckar very justly points out one of the most capital defects of Mr. Pitt's administration; who always supposed that the power of France was to cease with her credit, and measured the period of her existence by the depreciation of her assignats. Whereas, France was never more powerful, than when she was totally unable to borrow a single shilling in the whole circumference of Europe, and when her assignats were not worth the paper on which they were stamped.

Such are the principal contents of M. Neckar's very respectable work. Whether in the course of that work, his political notions appear to be derived from a successful study of the passions of mankind, and whether his plan for the establishment of a republican government, in France, for the ninth or tenth time, evinces a more sanguine, or a more sagacious mind, than the rest of the world, we would rather our readers should decide for themselves, than expose ourselves to any imputation of arrogance, by deciding for them. But, when we consider the pacific and impartial disposition which characterizes *the Last Views on Politics and Finance*, the serene benevolence which it always displays, and the pure morals which it always inculcates, we cannot help entertaining a high respect for its venerable author, and feeling a fervent wish, that the last views of every public man may proceed from a heart as upright, and be directed to objects as good.

Art. XI. *Minstrelsy of the Scotish Border:* Consisting of Historical and Romantic Ballads, collected in the Southern Counties of Scotland; with a few of modern date, founded upon local tradition. 2 vol. 8vo. Kelso: Printed for T. Caddel, jun. and W. Davies, London. 1802.

THE task which Mr. Scott has here undertaken, requires no common combination of abilities. He appears before the public in the distinct characters of author and editor, and unites, in his own person, the offices of antiquary, critic, and poet.

Such a task is not light; its execution, therefore, is entitled to indulgence in censure, and to liberality in praise.

By the publication of the *Reliques of Ancient Poetry*, Dr. Percy conferred on literature an inestimable benefit. Every age is easily enamoured of its own productions, and neglectful of antiquated merit. The reverend prelate's labours corrected this error. He dug up many jewels from among the ruins of time. He rescued from oblivion the scattered records of the taste and feeling of former days. He excited the interest of the poet and of the historian; and united in friendly league, criticism and antiquarian science. His work fortunately became popular; and its popularity paved the way to similar collections, among which is to be reckoned the work before us.

The *Minstrelsy of the Scotish Border* contains poems of three different classes: ancient *historical* ballads, ancient *romantic* ballads, and *modern* compositions, chiefly in imitation of the latter. Besides these, the Notes and Illustrations occupy much space in the volumes, and form no inconsiderable portion of the editor's merit.

The legitimate aim of history and of poetry is the same—to improve mankind, *delectando, pariterque monendo:* but the object is attained by different means. History follows human events through the course of time; poetry seizes their prominent features, their permanent principles the same yesterday, to-day, and for ever. History is a subject of profound philosophical investigation, but poetry, as Sir Philip Sidney observes, 'is indeed the right popular philosophy.' In a publication which endeavours to unite their separate advantages, something must be conceded on both sides. It is no objection to these volumes to say, that the poetry is sometimes trivial, any more than it would be to remark that the historical facts are not always correct.

The first merit of an editor, with respect to history, is his *fidelity*. This merit, if we may judge from internal evidence, Mr. Scott possesses in an eminent degree. Very few indeed of the pretended restorers of literary history, especially among our own countrymen, stand blameless in this respect. The long disputed charges against Macpherson, and the proved and acknowledged forgeries of Pinkerton, are instances too well known to need a comment. Occasional artifices may indeed be justified by the state of public taste. Perhaps, if Dr. Percy had not a little softened down the roughness of his valuable *Reliques*, he would have found neither readers nor followers. But the necessity of deception no longer exists: and Mr. Scott has felt that he might confidently publish the rudest of these ballads, in the very state in which they were heard by our ancestors. A few verbal corrections (which we shall presently shew to have

been injudiciously made) scarcely make an exception to this remark.

The *activity* and *zeal* of the collector appears from the number of fragments, and the variety of sources from which they were drawn. We must regret, with him, that many compositions of great interest and antiquity, compositions formerly popular over a wide extent of country, and quoted as authority by contemporary poets and historians, should now be irrecoverably lost. But this consideration renders us the more sensible of his merit, in amassing the present remains. They are said to be drawn, partly from the recital of shepherds and aged persons in the recesses of the Border mountains, and partly from the MSS. of different Border antiquaries. These authorities are certainly the best; and as Mr. Scott informs us that he began to consult them in early youth, we may conclude that he has preserved many poems, which would otherwise have become, by this time, irrecoverable.

Selection from the mass so obtained was his next duty; and, in this exercise of the judgment, it is scarcely possible to meet universal approbation. What one man would deem trivial, another will estimate highly; what one would reject with scorn another treasures up with admiration. On the whole, it is better to run the hazard of being voluminous than fastidious; and so the editor seems to have decided. Perhaps the omission of one or two trifling pieces (such as *Armstrong's Goodnight*, vol. i. p. 183.) would have rendered the work less heavy. If such pieces had never been published before, they could not claim admission on the ground of poetical merit; and, where they had been previously printed, the reasons for their rejection would be so much strengthened, that they should only have been admitted for the sake of some very important illustration. The historical grounds of selection are either events or manners; to both which these volumes apply. The period of time which they include, is chiefly confined to the 16th century; during which, the state of politics on the Scotish Border may easily be inferred from the *Sang of the Outlaw Murray*, the *Battle of Otterbourne*, and the *Raid of the Reidswire*, which describe events of a public nature.

The state of morals, however, and the condition of private life, among the Borderers of those ages, are still more remarkable; and, if this collection had no other merit than that of preserving the memorials of manners that can never return, it would be entitled to considerable praise. Subsisting by rapine, which they accounted lawful and honourable, they blotted honesty out of the list of their virtues, at the same time that they were trained, by their perilous expeditions, to a high degree of enterprising courage, activity, and finesse. The insecurity of

their possessions made them free and hospitable in their expenditure; and the common danger bound the several clans together by assurances of inviolable fidelity, and even softened their mutual hostility by the tacit introduction of certain laws of honour and of war. In these traits, we seem to be reading the description of a Tartarian or Arabian tribe, and can scarcely persuade ourselves that this country contained, within these two centuries, so exact a prototype of the Bedouin character. Camden has sketched it with considerable accuracy, in the following passage of his Britannia.

'What manner of cattle stealers they are, that inhabit these valleys, in the marches of both kingdoms, John Lesley, a Scotchman himself, and Bishop of Ross, will inform you. They sally out of their own borders, in the night, in troops, through unfrequented bye-ways, and many intricate windings.—All the day-time, they refresh themselves and their horses in lurking-holes they had pitched upon before, till they arrive, in the dark, at those places they have a design upon. As soon as they have seized upon the booty, they, in like manner, return home in the night, through blind ways, and fetching many a compass. The more skilful any captain is to pass through those wild deserts, crooked turnings, and deep precipices, in the thickest mists and darkness, his reputation is the greater, and he is looked upon as a man of an excellent head. And they are so very cunning, that they seldom have their booty taken from them, unless sometimes, when, by the help of blood-hounds following them exactly upon the track, they may chance to fall into the hands of their adversaries. When being taken, they have so much persuasive eloquence, and so many smooth insinuating words at command, that if they do not move their judges, nay, and even their adversaries (notwithstanding the severity of their natures), to have mercy, yet they incite them to admiration and compassion. Vol. i. p. lvi. lvii.

The publication now before us contains many curious and interesting illustrations of this peculiar character. The laxity of Border morals, in respect to property, is seen in the very animated ballad of *Jamie Telfer of the Fair Dodhead*, the *Lochmaben Harper*, *Dick o' the Cow*, &c. On the other hand, courage, fidelity, enterprise, are exemplified in *Kinmont Willie*, *Jock o' the Side*, and *Archie o' Cafield*. And, finally, the natural tendency of the human mind, in such a state of society, to superstition and romantic wonder, appears from most of the ancient poems in the second volume.

To *illustrate* these particulars, the editor has brought together much valuable matter in an introduction of 138 pages, and in long notes and occasional dissertations dispersed through the body of the work. Among these we notice, with particular approbation, a discourse in the 2d volume (p. 167, &c.), on the *Fairies*

of Popular Superstition, in which the author takes a much wider range than was to have been expected from a collector of Border ballads; and evinces an extent of reading, and sagacity of conjecture, which have never before been applied to this subject. We recommend this treatise, as by far the most learned, rational, and entertaining, that has yet been made public, upon the subject of these superstitions. It is perhaps of little consequence, whether the manner of these illustrations be exactly suitable to the matter; yet we cannot but notice a false oratorical taste, which seems foreign to the office of a commentator. Instead of detailing, with appropriate simplicity, the events necessary to the introduction of his work, he begins thus: 'From the remote period when the Roman Deity Terminus retired behind the ramparts of Severus,' &c. It seems to have been a similar error in taste which suggested the title of the book itself—*Minstrelsy*; a word not only inapplicable in its original sense, but rendered in some measure ludicrous, by the currency it has obtained among our modern sonetteers, or, as they style themselves, Minstrels. The English idiom is not always preserved, especially in words of technical origin. Thus (in Introduct. p. iii.), 'They were forfeited,' *i. e.* their estates. So (in vol. ii. p. 218 223), 'abstraction' and 'abstracted' are used for stealing and stolen.

We come now to consider the poetical merit, which, though not the only, must be the chief object of such a publication; and which, we may add, is here attained in a very eminent degree. It is the business of poetry to delineate feeling; and where shall we look for feeling so undisguised and powerful, as in those early periods of civilization, which have already excited men to the cultivation of their intellectual energies; but have not yet fettered them with that multiplicity of rules which forms them into the mere machines of polished society. The minds of men in such a state are indeed less delicate, less attractive of general sympathy, than in succeeding periods; but they are more poetic, more interesting in particular contemplation, more distinctly marked and intelligible. We are not, then, to view these poems as *facta ad unguem*—high-polished, and elaborate specimens of art; but as exhibiting the true sparks and flashes of individual nature.

Hence we shall find a savage wildness in the superstition of the *Lyke-Wake Dirge*, and in the tumultuous rage of the *Fray of Suport*; but we may trace gradations from these to the exquisite tenderness of the Fragments: Vol. ii. p. 157,

'I've heard them lilting, at the ewe milking, &c.'

Of which, by the by, Mr. Scott would have done well to tell us *how much* he deems ancient, and to give us 'the positive evidence' that convinced him *the whole* was not so.

The *Lament of the Queen's Marie* (vol. ii. p. 154.) connected with its tale*, bears so strong a stamp of nature, that we cannot resist quoting it; hoping, at the same time, that Mr. Scott will spare no pains to recover the remainder, if there be any.

'—"O ye mariners, mariners, mariners,
That sail upon the sea,
Let not my father nor mother to wit,
The death that I maun die!"—

'When she cam to the Netherbow port,
She laughed loud laughters three:
But when she cam to the gallows' foot,
The tear blinded her e'e.

'—"Yestreen the Queen had four Maries,
The night she'll ha'e but three;
There was Marie Seton, and Marie Beatoun,
And Marie Carmichael, and me."—'

The ballad of *Fair Helen of Kirconnell* (vol. i. p. 72), founded on a well-known and affecting incident, has been often given to the public; but never so perfect as in its present shape. The following stanzas are of exquisite merit:

'I wish I were where Helen lies,
Night and day on me she cries,
O that I were where Helen lies,
On fair Kirconnell lee!

'Curst be the heart that thought the thought,
And curst the hand that fir'd the shot,
When in my arms† burd Helen dropt,
And died to succour me.

'O think na ye my heart was sair,
When my love dropt down, and spak nae mair,
There did she swoon wi' meikle care,
On fair Kirconnell Lee.

'As I went down the water side,
None but my foe to be my guide,
None but my foe to be my guide,
On fair Kirconnell Lee;

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* The Queen's Marie was a Frenchwoman, who was executed, with her lover, for the murder of an illegitimate child.

† We read *bird*, as forming a simple and natural metaphor: its force is destroyed, by making it synonymous with maid.

'I lighted down, my sword did draw,
I hacked him in pieces sma,
I hacked him in pieces sma,
For her sake that died for me.

'O Helen fair, beyond compare,
I'll make a garland of thy hair,
Shall bind my heart for evermair,
Until the day I die.

'O Helen fair! O Helen chaste!
If I were with thee, I were blest,
Where thou lies low, and takes thy rest,
On fair Kirconell Lee.'

The following verses, though of a very different character, afford perhaps a fairer specimen of the kind of pathos and simplicity that belong to the old romantic ballad. "King Honor had been murdered by a traitor, and his Queen, who was left in a state of pregnancy, was closely guarded, till it should appear whether she was to produce a boy or a girl. The latter was to be spared, but a boy was to be immediately killed. The Queen makes her guards drunk, and says—(Vol. ii. p. 77-79.)

'—"O narrow, narrow, is this window,
And big, big, am I grown!"—
Yet, through the might of Our Ladye,
Out at it she is gone.

'She wander'd up, she wander'd down,
She wander'd out and in;
And at last, into the very swine's stythe,
The Queen brought forth a son.

'Then they cast kevils them amang,
Which sould gae seek the Queen;
And the kevil fell upon Wise William,
And he sent his wife for him.

'O when she saw Wise William's wife,
The Queen fell on her knee;
—"Win up, win up, Madame!" she says;
"What needs this courtesie?

'—"O out o' this I winna rise,
Till a boon ye grant to me;
To change your lass for this lad bairn,
King Honor left me wi'.

'"And ye maun learn my gay goss hawk
Right weel to breast a steed;
And I sall learn your turtle dow*
As weel to write and read.

* *Dow*—Dove.

' " And ye maun learn my gay goss hawk
To wield baith bow and brand;
And I sall learn your turtle dow
To lay gowd* wi' her hand.

' " At kirk and market when we meet,
We'll dare make nae avowe,
But " Dame, how does my gay goss hawk?"—
" Madame, how does my dow?"—'

Among the many instances of spirited description, there is none more striking than the picture of old Walter Scott of Harden in the fight for Jamie Telfer's cattle: (Vol. i. p. 87.)

' But Willie was stricken ower the head,
And through the kumpscap† the sword has gane,
And Harden grat for very rage,
When Willie on the grund lay slane.

' But he's tu'en aff his gude steel cap,
And thrice he's wav'd it in the air—
The Dinlay‡ snaw was ne'er mair white
Nor the lyart locks of Harden's hair.

' " Revenge! Revenge!" auld Wat can cry,
" Fye, lads, lay on them cruellie!" &c.

The rage of *The bauld Bacleugh*, when he is informed that the English warden, Lord Scroop, had imprisoned a Scotchman in time of truce, is also deserving of an extract: (Vol. i. p. 128-9.)

' He has tu'en the table wi' his hand,
He garr'd the red wine spring on hie—
" Now Christ's curse on my head," he said,
" But avenged of Lord Scroop I'll be!

' " O is my bunnet§ a widow's curch ||
Or my lance a wand of the willow tree?
Or my arm a ladye's lillye hand,
That an English Lord should lightly¶ me?

' " And have they tu'en him, Kinmont Willie,
Against the truce of Border tide?
And forgotten that the bald Bacleugh
Is Keeper here on the Scotish side?

' " And have they e'en tu'en him Kinmont Willie,
Withouten either dread or fear?
And forgotten that the bauld Bacleugh
Can back a steed or shake a spear?

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* *Lay gowd*—To embroider in gold. † Head-piece.
‡ A mountain in Liddesdale. § *Bunnet*—Helmet.
|| *Curch*—Coif. ¶ *Lightly*—Set light by.

'" O were there war between the lands,
As well I wot that there is none,
I would slight Carlisle Castell high,
Though it were builded of marble stone.

'" I would set that castell in a low,*
And slocken it with English blood!
There's nevir a man in Cumberland,
Should ken where Carlisle Castell stood." '

In many of the recitals is a mixture of rough humour, which like the characterizing touches of Hogarth's pencil, gives an animation often attempted in vain by more polished writers. Of this the ballad of Kinmount Willie affords many examples, especially where he is borne out of prison in irons on the shoulders of Red Rowan, the starkest man in Tiviotdale. Vol. i. p. 134.

'Then shoulder high, with shout and cry,
We bore him down the ladder lang:
At every stride Red Rowan made,
I wot the Kinmont's airns play'd clang!

'" O mony a time," quo' Kinmont Willie,
" I hae ridden horse baith wild and wood,
But a rougher beast than Red Rowan,
I ween my legs hae ne'er bestrode.

'" And mony a time," quo Kinmont Willie,
" I've prick'd a horse out oure the furs,
But since the day I buckit a steed,
I never wore sic cumb'rous spurs." '

Thinking, as we do, respecting the real standard to which the merit of these poems is to be referred, we cannot agree with the editor in the opinion which he has expressed of that class of tragic ballads to which the *Bonny Hynd*, and (we may add) *Jellon Grame*, the *Cruel Sister*, &c. belong. The cause of virtue and morality is not so slight as to be injured by the animated discussion of themes, which (as the editor justly observes) were favourites with the early Grecian muse; especially with those 'lofty, grave tragedians,' who, in the opinion of no lax moralist, were 'teachers best of moral wisdom.' It is not the knowledge that enormities exist, but the concealment, or the false or defective statement of what constitutes their criminality, that vitiates, while it weakens moral principle. The Newgate Register, or the Beggar's Opera, may have done harm, by the ignorance of their authors; but who was ever corrupted by Othello? The ballads above mentioned have such poetic merit, as is more than a suffici-

* *Low*—Flame.

ent antidote to their supposed immoral tendency, and if Mr. Scott possesses others of equal beauty, we trust he will not be deterred, by conscientious scruples, from giving them to the public.

If we were disposed to be very apprehensive, indeed, as to the effect of any ancient ballads upon our national morality, we might very well take exception at the greater part of this collection. The glory of outlaws, and the renown of cattle stealers, is commemorated in almost every one of the historical poems; and the heroines of all the romantic ballads, we believe, without one exception, have the misfortune to be mothers before marriage. It is amazing, indeed, to observe with what invariable uniformity the circumstances of pregnancy and parturition are brought forward to heighten the interest of every love-story. When Lillie Flower, for instance, is to be murdered by the ungrateful Jellon Grame, she says,

> "Your bairn, that stirs between my sides,
> Maun shortly see the light;
> But to see it weltering in my blood,
> Would be a piteous sight."

'The Lass of Lochroyan' in like manner, exclaims,

> "And wha will father my young son,
> Till Lord Gregory comes hame?"

The fate of the romantic 'White Lilly,' is thus simply described:

> 'About the dead hour o' the night,
> The ladye's bower was broken;
> And, about the first hour o' the day,
> The fair knave bairn was gotten." Vol. ii. p. 65.

The whole story of 'Willie's Ladye,' turns on a difficult delivery. The fair 'Lady Janet' commits a *faux-pas* of the same kind; and so common does the indiscretion appear to have been, that the bold baron, her father, is made to enquire after it in this easy manner:

> 'Out then spoke her father dear,
> And he spoke meek and mild;
> And ever, alas, my sweet Janet,
> I fear ye gae with child.'

'Fair Annie's case, however, is the most aggravated. She makes the following very pertinent interrogatory:

> 'But how can I gang maiden like,
> When maiden I am nane;
> Have I not born SEVEN sons to thee,
> And am with child again?"

After all this, we are not surprised that 'Cospatrick' wedded eight wives successively, without finding one virgin among them; though we think his lamentation, on the failure of the last experiment rather too violent for the occasion.

'I am the most unhappy man,
That ever was in Christen land:
I courted a maiden meik and mild,
And I hae gotten nothing but a woman with child.'

In the *wording* of these poems, no precise rule seems to have been followed; and hence, some modernisms have crept in, which a more attentive collation of MSS. or oral traditions, together with a due regard to the probable date of the composition, would, perhaps have excluded. Some expressions very much resemble the style of our modern poetasters; as, 'wave danger back on thee,' vol. ii. p. 65;—'whose notes made sad the listening ear,' vol. ii. p. 149. Some words seem substituted for more appropriate provincial terms; as, '*braided* her yellow hair,' vol. ii. p. 229. which is in some copies '*shed*,' a locally descriptive word. So, 'a red-hot gad of *iron*,' vol. ii. p. 240. should be '*airn*,' more suitable to the rhyme.

Having reviewed the remains of antiquity, which constitute the chief value of this work, it remains to say something of the productions avowedly modern.

They have all considerable merit, and often touch upon true feeling; as in Mrs. Cockburn's *Flowers of the Forest* (vol. ii. p. 163.), of which Burns himself has noticed the pathetic exclamation:

'O fickle fortune! why this cruel sporting?
Why thus perplex us, *poor sons of a day?*

But we may in general observe, that they breathe not enough the rude energy of the Scotish ballad: they have too little simplicity to suit the rest of the collection. We can scarcely conceive that an unaffected lover of Scotish music would express its effect, as Mr. Leyden has done (vol. ii. p. 2.), by references to Asiatic literature, and in all the luxuriancy of Asiatic diction.

This discordance becomes still more striking, when the compositions are announced as imitations of the ancient style. Their professed aim is 'to unite the vigorous numbers and wild fiction of the ancient ballad, with greater equality of versification and elegance of sentiment.' We do not disapprove this attempt. Let the modern poet, imitate, if he can, the excellencies and avoid the defects of the old ballad writers; but let him begin by adopting their strength of sentiment, and energy of expression; and let him take especial care to draw his ornamental additions from

purer sources than the bonny Jeans, the Alonzos, and Imogenes of the day. After all, this is, in fact, to create a new species of composition; a diluted taste, which probably may not suit the palate of the genuine lover of antiquity. Undoubtedly, Mr. Scott, and his friend Mr. Leyden, have displayed great powers of imagination, and harmony of numbers. The *Eve of St. John*, *Clenfinlas*, *Thomas the Rhymer*, *Lord Soulis*, and the *Cout of Keeldar*, are all (but particularly the two first) much superior to the numerous tales of wonder with which our patience has of late been so heavily taxed. But do they in the least resemble the general style of antiquity? Or are they even like any one old ballad in this collection? Where, for instance, shall we find an ancient stanza like the following (vol. ii. p. 288.)?

> 'Yet fragments of the lofty strain
> Float down the tide of years;
> As buoyant on the stormy main,
> A parted wreck appears."

It is our opinion, therefore, that the modern part of this work will obtain (and, with certain deductions, will deserve) the applause of a numerous class of readers. But that class is different from the one which will justly relish the ancient compositions. Mr. Scott has announced some intended additions, which we hope he will speedily give to the public, together with a second edition of the present work: as that publication will afford him an opportunity of modelling the whole anew, we take the liberty of suggesting, that the whole of the modern part may be conveniently thrown into one volume, which will lose nothing of its intrinsic value by being separate from the rest.

Although we have freely censured the defects of this collection, we wish it to be understood that we consider them as *pulchro in corpore nævos*, as those common literary imperfections, '*quas aut incuria fudit, aut humana parùm cavit natura.*' The work, upon the whole, is highly interesting and important to literature: and the manner in which it is executed reflects no small degree of credit on the editor.

Those who feel an interest in Scotch printing, will remark with pleasure the singular beauty of the type. With appropriate reference to the subject, it was executed on the Border, and proceeds from the press of Mr. Ballantyne of Kelso.

ART. XII. *On the Necessary Truth of certain Conclusions obtained by Means of Imaginary Expressions.* By Robert Woodhouse, A. M. Fellow of Caius College, Cambridge. (In the Transactions of the Royal Society of London. 1802.)

NO small part of modern mathematics depends on the doctrine of imaginary or impossible quantities. It is natural to expect that the grounds of a doctrine, on which rests so large a portion of the analytical edifice, have been fully examined; that all objections have been successively answered; and that no room is left for doubt or cavil. The contrary, however, will, in reality be found to be the case. Mathematicians have been more attentive to improve and extend their methods than sollicitous to examine the principles on which they are founded. Men of a scientific turn, who wish to reason as well as to compute, and who will not assent to the truth of the conclusion, without fully comprehending every step in the reasoning that leads to it, have justly to complain of the mystery and paradox attending the use of impossible quantities.

Imaginary expressions occur in mathematical investigations in two ways, which it is proper to distinguish. Sometimes they merely mark an operation that cannot be performed, or an absurd conclusion: and this always happens when a contradiction takes place in the conditions to be fulfilled. This office of imaginary expressions is attended with no difficulty; it is allowed to be legitimate, and its use is to point out the limitation of problems. In other cases, imaginary expressions are introduced into mathematical investigations (and sometimes they occur very unexpectedly*) when no inconsistency really takes place in the relations of the magnitudes concerned, and when we are certain that the quantities signified are possible and real. When this happens, on carefully examining the reasoning employed, it will be found that some contradiction is implied, or that some impossible supposition is unwarily admitted. The fault here is in the reasoning itself, and not in any inconsistency in the conditions to be fulfilled. The proper remedy seems to be, to trace back the investigation till we arrive at that step where the absurdity is implied; and, by turning the reasoning into a new train, to bring out a real and intelligible result by legitimate means. Mathematicians have, however, followed a different course. The imaginary expressions of real quantities have been retained, and rules have been invented for operating with them as if they were real quantities: they are multiplied and divided, added and substracted.

* As in what is called the irreducible case, in Cubics.

And although such expressions are unintelligible, and in all cases imply an impossibility, yet (what is paradoxical) the conclusions obtained by their means are uniformly found to be true.

In the 68th volume of the Philosophical Transactions of London, we find a memoir 'On the Arithmetic of impossible quantities,' written by a mathematician who has thrown much light on the different matters he has treated; and all whose writings are equally remarkable for the ingenuity and elegance which they display. Justly considering the operations of the imaginary arithmetic as nugatory in point of science and of logical reasoning, he has, in several instances, compared investigations by means of impossible quantities with the parallel investigations in which real quantities only are concerned: and he has shown that, while the latter strictly demonstrate certain properties of the hyperbola, the former, by means of the imaginary characters, lead to the same properties of the circle. The imaginary arithmetic is therefore no more than a particular method of tracing the affinity between the circle and hyperbola; and the truth of its deductions rests ultimately on an argument from analogy.

By the speculations of Mr. Playfair, the imaginary investigations assume a scope and purpose: and if he has not gone the length of providing that the conclusions obtained by means of impossible quantities are necessarily true, he has at least pointed out a source from which a strict demonstration may in all cases be drawn.

In the paper before us, Mr. Woodhouse, after having stated the objection commonly urged against the use of imaginary quantities, thus proceeds:

'From the very concessions of the mathematicians that have opposed the use of impossible quantities, is to be derived a powerful argument, an argument sufficiently satisfactory to the mind, that operations with impossible quantities are really regulated by the rules of logic equally just with the logic of possible quantities. It is conceded and mentioned as a paradox, that the conclusions obtained by the aid of imaginary quantities are most true and certain. Now, if operations with any characters or signs lead to just conclusions, such operations must be true by virtue of some principle or other; and the objections against imaginary quantities ought to be obviated upon the unsatisfactory explanation given of their nature and uses.

The drift of this argument is not very plain. If it is only meant to say that there must be some way or other of accounting for the paradox, that truth is produced by unintelligible operations, or by faulty reasoning, the position will hardly be denied. On the other hand, if it is intended to argue, that every general method, that uniformly leads to true conclusions, must therefore be regulated by the rules of sound logic, the inference

cannot be admitted. We are of opinion that the imaginary arithmetic is one glaring instance of the contrary; but it is not the only instance that can be produced. The differential calculus, as laid down by Leibnitz and his followers, is another example of a method, even more extensive than the imaginary arithmetic, always leading to truth, and yet founded in false and inconclusive reasoning. We apprehend that, in both instances, the paradox is to be accounted for in the same way; namely, that the false suppositions always implied in either method, are obviated and corrected by the very operations which the rules of the calculus require to be performed.*

Mr. Woodhouse next animadverts on the principle of analogy advanced by Mr. Playfair: and it must be allowed that his strictures are well founded, in so far as they go to prove that principle to be imperfect; and that there is room for farther researches on this subject.

After the observations we have premised, it will be expected that we are to proceed, with some degree of scepticism, to the examination of our author's own mode of explanation; which professes to reconcile with the rules of logic, and with the principles of sound reasoning, operations in which other mathematicians have been able to discover nothing but obscurity and contradiction. Every logical process may be traced to certain ultimate principles: and the justness of the conclusion depends upon the clearness of those principles, no less than upon the legitimacy of the intermediate inferences. Our attention will therefore be naturally directed to the peculiar notions on which our author founds this explanation; and, that we may proceed fairly, we shall quote his own words:

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* 'Il me semble que comme dans le calcul differentiel, tel qu'on l'emploie, on considère et on calcule en effet les quantités infiniment petites ou supposées infiniment petites elles-memes, la veritable metaphysique de ce calcul consiste en ce que l'erreur resultant de cette fausse supposition est redressée ou compensée par celle qui naît des procédés mêmes du calcul, suivant le quels on ne retient dans la differentiation que les quantités infiniment petites du meme ordre.' La Grange, Theorie des Fonct. Analyt. p. 3.

In the imaginary arithmetic, the characters $x\sqrt{-1}$ and $y\sqrt{-1}$ are in many operations treated like real quantities: but in certain multiplications (as $x\sqrt{-1} \times y\sqrt{-1} = -xy$) it will be found that the sign $\sqrt{-1}$ is in reality a mark to show that the ordinary rule, for the sign of the product in real quantities, is to be reversed, and that $-$ must be written, where, in real quantities, $+$ would be required. It is by this use of the sign $\sqrt{-1}$ that the false supposition implied in impossible quantities is compensated.

'The development of e^x (into the series $1+x+\frac{x^2}{2}+$, &c.) is general, whatever x is, provided it be a real quantity; but $e^{x\sqrt{-1}}$ can never be proved equal to the series $1+x\sqrt{-1}-\frac{1}{2}x^2-\frac{1}{2\cdot3}x^3\sqrt{-1}$ &c. What then is to be understood by $e^{x\sqrt{-1}}$? Merely this, that $e^{x\sqrt{-1}}$ is an abridged symbol for the series of characters $1+x\sqrt{-1}-\frac{x^2}{2}-$, &c. not proved, but assumed, by extending the form really belonging to e^x to $e^{x\sqrt{-1}}$.'

'To remove all doubt and occasion of cavil, it is to be understood that $\left(e^{x\sqrt{-1}}+e^{-x\sqrt{-1}}\right)$ means, that the terms of the series which $e^{x\sqrt{-1}}$ represents, are to be connected with the terms of the series that $e^{-x\sqrt{-1}}$ represents, according to the rules obtaining for the addition of real quantities: Again, that $x\sqrt{-1}-x\sqrt{-1}=0$, not by bringing $x\sqrt{-1}$ under the predicament of quantity, and making it the subject of arithmetical computation, but by giving to the signs + and − their proper signification, when used with real quantities; and they designate reverse operations.'

'After it is demonstrated that $e^x=1+x+\frac{x^2}{2}$, &c. most mathematicians put $e^{x\sqrt{-1}}=1+x\sqrt{-1}-\frac{x^2}{2}$, &c. without further ceremony; thus supposing that the impossible case is included in the development of the real function. Mr. Woodhouse gets rid of this absurdity, by making that an affair of notation, which others assume as a thing demonstrated. It will not be necessary for us to inquire how far the matter is mended by this artifice; because the great objection to the use of impossible quantities, and to the logical justness of the conclusions obtained by their means, still remains in its full force. What does the series of characters denote? Will it be granted, that the mind can proceed one step in the investigation of truth, without clearly comprehending the objects about which it reasons?

We are next required to grant, that $x\sqrt{-1}-x\sqrt{-1}=0$, not by bringing $x\sqrt{-1}$ under the predicament of quantity, and making it the

subject of arithmetical computation, but by giving to the signs + and — their proper signification when used with real quantities. We confess we consider this postulate more deserving the name of a metaphysical subtlety, than a principle of reasoning clearly laid down. The signs + and — denote operations to be performed with numbers; and they have no signification at all, unless the numbers to be operated with are distinctly conceived in the mind. We contend, that when we put $x\sqrt{-1}-x\sqrt{-1}=0$, we treat the character $x\sqrt{-1}$ as the representative of a number: and that the expression $x\sqrt{-1}-x\sqrt{-1}=0$, is really supposed to be included in the general case A—A=0, which is legitimate and intelligible only so long as A represents a real number.

We shall be spared the task of examining further into a mode of explanation which, at the outset, is liable to so great objections. Operations deduced from such principles are undeserving the name of reasoning; and they cannot afford one particle of evidence either of truth or of falsehood. We admit it, that the operations of the imaginary arithmetic exhibit, to the eye, a series of transformations similar to those that take place in real investigations: but, in point of science and of reasoning, there is a wide difference between the two. For, in real investigations, all the characters are significant; and the principles from which we set out are clear: and if we stop short at any step of the process, we obtain a proposition distinctly apprehended by the mind, and linked to the premises by a chain of legitimate deductions. In imaginary investigations, on the other hand, if we stop short of the conclusion, when the impossible quantities have disappeared, we find nothing but a parcel of characters that offer no meaning to the understanding. The excellent geometer, who has advanced the principle of analogy, setting aside the imaginary operations, has directed our attention to the conclusion to which they lead, and has shewn its connection with another truth that is strictly demonstrated. His researches, indeed, stop here, and he has left the evidence of the one proposition to rest on the affinity it has with the other, or on the analogy of the curves to which the two propositions may, in all cases, be referred. We have only to go one step further to arrive at a satisfactory solution of the whole difficulty; for, if we dismiss all reference to the circle and hyperbola, and, by a general notation, contrive to express the related proposition in algebraic language, free from impossible quantities, it will manifestly appear, that there is a necessary connection between them, independent either of the real or imaginary investigation. If the one proposition be supposed to be true, then, by a very extensive principle of analysis, the other will follow as a necessary consequence of that proposition. But this is not the

place to enlarge on this subject, the importance of which has already occasioned us to transgress our limits.

The mode of application not admitted, the present paper will be found to contain nothing new or interesting to geometers. It is only incumbent on us to notice, that some just observations occur in discussing the controversy concerning the logarithms of negative numbers towards the end of the paper.

We cannot conclude our remarks on this article, without expressing our disapprobation of the mode in which Mr. Playfair's method of reasoning is attacked, not openly, and by name, but indirectly, covertly, and by insinuation.

ART XIII. *Oupnekhat (id est, Secretum Tegendum) opus ipsa in India rarissimum, continens antiquam et arcanam, seu Theologicam et Philosophicam, doctrinam, è quatuor sacris Indorum libris, Rak Beid, Djedjr Beid, Sam Beid, Athrban Beid, excerptam; ad verbum, è Persico idiomate, Samscreticis vocabulis intermixto, in Latinum conversum; dissertationibus et annotationibus, difficiliora explanatibus, illustratum: studio et opera Anquetil Duperron, Indicopleustæ, R. Inscript. et Human. Litter Academiæ olim Pensionar. et Directoris.* Tomus I. 4to. pp. 846. Paris. 1801.

IF intolerance and fanaticism be the usual concomitants of Islamism, (an assertion, we think, somewhat too generally expressed), the descendants of Tamerlane, who reigned in Hindústan, furnish some remarkable exceptions to the received opinion. At the head of these illustrious personages we should, perhaps, place Dara Shecuh, the eldest son of the Emperor Shah Gehan. The attention which this Prince bestowed in investigating the antique dogmas of the Hindu theology, and the munificence with which he rewarded the learned Brahmans, whom he collected from all parts of the empire, furnished his brother Aurengzebe with a pretext to misrepresent his motives, and to alarm the zealous moslems with the danger of an apostate succeeding to the throne. The melancholy catastrophe which ensued; the death of the unhappy Dara, with the long and brilliant reign of the successful hypocrite, who founded his greatness on the destruction of his brothers, are detailed in the page of history. If the sceptical philosophers be disposed to exclaim with the Roman Epicurean, 'Tanta Religio potuit suadere malorum,' we must state our conviction, that ambition, not fanaticism, prompted the deed; though the steps by which he mounted the throne, threw the rigid veil of superstition over the subsequent conduct of Aurengzebe, and gave that tone to his court.

Under the patronage of Dara Shecuh, a variety of Sanscrit works were translated into the Persic language, and, amongst

others, that which M. Anquetil Duperron calls Oupnekhat, vel Secretum Tegendum. But before we proceed to consider the merits of his translation, we think it useful to premise a few observations, to illustrate the nature of the original work, and to define the expectations, which might have been formed of the version. In this part of our task, we shall derive little assistance from the venerable translator, who seems too readily to adopt the common error of considering every thing that is oriental as curious, every thing that is ancient as sublime, and every thing that is mysterious as profound.

The Hindû Vedas are referred, by the records and traditions of the Brahmans, to the earliest periods of society. Though it may be impossible to verify their real date, their relative antiquity appears manifest from their style, already obsolete when the Puranas were composed, to whatever æra these latter compositions may be referred. Crisna, the island-born, obtained the name of Vyasa, or the Divider, from having arranged them in their present form, and divided them into four portions, the last of which, named Atharvana, seems composed in a style somewhat more modern, though the whole must have been anterior to the period at which Vyasa was born, in an islet of the Yamuna. They contain the rude metaphysics, and primeval dogmas of the ancient Brahmans, with a minute detail of religious rites, ceremonial observances, and incantations, or *mantra*, which served, or were supposed to serve, as a specific for every calamity, physical and moral. But of the false religions which have successively obtained in the world, the absurd dogmata have frequently furnished a striking contrast with the state of science amongst their followers: knowledge and the arts spring forth, and are progressive; the powers and operations of nature are calculated and observed; the human mind becomes the object of its own researches; general deductions and general maxims enlighten and regulate the conduct of states, and the transactions of individuals; but the consecrated veil which covers the arcana of superstition, cannot be withdrawn without impiety; and an enlightened age frequently views the universal prevalence of unphilosophical, absurd, or barbarous dogmata. The massive structures of ancient Egypt attest a considerable progress in mechanics; but the wars of Typhon and Osiris, and the obscene rites of their local deities, are an insult to reason, and to nature. Would we profit by Grecian science, it is to Aristotle, and not to Hesiod, we must have recourse: yet the old bard was probably the faithful historian of opinions which prevailed more or less generally, till Europe was enlightened by the divine rays of a religion revealed from above. The Coran relates that Mohammed was transported into the moon; but the Kalifs who succeeded him, and implicitly be-

lieved in the pretended miracle, employed mathematicians to measure a degree of the circle. From these observations, our readers will possibly infer, that if Indian literature be capable of affording curious or instructive information, it probably is not from the sacred Vedas that the stream will flow. These precious volumes have not hitherto been perused by any European. The preceding observations are collected from passages occasionally cited by the Pauranicas and their commentators; and from the valuable deductions of Sir William Jones, who had inspected several extracts. But it has happened to the Vedas as to the Coran. Though the text of both be held sacred by the followers of their respective doctrines, yet a recondite and philosophic sense may frequently be elicited from many, or from most of their expressions; and in a subsequent age, the ample commentaries of theologians, metaphysicians, and jurisconsults, have wrought up the scanty materials of their sacred books into a comprehensive but obscure epitome of knowledge, divine and human.

The term Upanisada, which really signifies arcanum, is used by the Hindûs to designate a selection of one or more chapters from the Vedas. The volume of these *excerpta*, translated by order of Dara Shecuh, is now presented to the public, clothed in a Roman garb, by M. Anquetil. The plan which this gentleman has adopted for the execution of this task, is, in our opinion, singularly injudicious. He has endeavoured to execute a translation altogether literal, and as this is utterly impossible, from the discrepancy of the Persic and Latin idioms, he has attempted to make it more intelligible, by inserting also the more classic forms of expression between parentheses. The words also, which in his manuscript appeared in red characters, he has transported *literatim* into his version: and, that they might not be disfigured by the Latin inflections, he has marked their case, by prefixing the Greek article. The result is, a Latin production which an Œdipus might divine, but a Priscian could never construe; with a confused mixture of words, Persic, Arabic, and Sanscrit, admirably exemplifying

'that Babylonish dialect
'Which learned pedants much affect.' HUDIBRAS.

We have been so fortunate as to procure a copy of the Persic work, and having collated a great variety of passages with M. Anquetil's translation, are happy to do justice to its accuracy, and to add our testimony to the very complete knowledge of the Persic he has exhibited throughout his work. It is painful to detract from this encomium, by mentioning, that our author hints that he derived considerable assistance from his knowledge of the Sanscrit; and that he has it in contemplation to publish

a dictionary of that language: whilst the work before us furnishes the most decisive proofs of his being totally unacquainted with it.

To enable our readers to judge of M. Anquetil's performance, we insert his version of the preface of the Prince Dara Shecuh, giving an account of the motives for undertaking the work; to which we will annex our own translation, from the Persic copy in our possession.

'Laus dzati (enti,) quod, vox pes τῶ bismillah (in nomine Dei) in omnibus libris samavi (cœlestibus) è secretis antiquis ejus est; et alham am alketab (inspiratio primæ sauratæ) quod in Koran madjid (glorioso,) desiguatio (illius) cum esm (nomine) supremo ejus est; et cuncti malaick (legati Dei, angeli,) et libri samavi ex anbia ve aolia (à prophetis et amicis Dei emissi); et omne (id omne) comprehensum in hoc esm (nomine) est.

'Verùm, postea quam ὁ fakir absque tristitiâ Mohammed Darashakoh, in anno mille et quinquaginta (1050) τῶ hedjiri, quo cum Kashmir (in τὸν Kasehmir,) paradiso simili, iverat; cum ui attractiva eenaiet alhi (favoris Dei) et beneficio na monteha (non terminato, infinito,) faustæ (ejus) voluntatis, perfectum kamalau (perfectorum) cremoremaarfan, ostad ostadan, pir piran, peischvai peischvaïan, mohed hakaiek agah (decus doctorum, magistrum magistrorum, senem senum, ducem ducum, unitarium (unitatis Dei assertorem,) veritatum conscium,) molaschah, pax τῶ allah (Dei) et excelsi (super illum!) invenit.

'Et cum gustus (voluptas) τῶ videre doctos cujuslibet sectæ, et audire verba excelsa unificationis, simul (ei) provenisset, et plurimos libros mysticos cum conspectu (in conspectum suum) attulisset, et resalha (scripta breviora) composita fecisset; et sitis τῶ petere tohid (unificationem,) quod mare est sine fine, momento cum momento (in dies) amplior (aucta fieret;) et sententiæ (opiniones) subtiles (arduæ) cum corde (ad cor ejus) pervenirent, quòd status earum, nisi cum verbo Alhi (Dei,) et magisterio (documento) dzat na monthaï (en tis non finiti) possibilitatem non habet: et cùm (in) Koran venerando (augusto,) et Fourkan nobili (benigno) plurima ænigmaticè dicta (tecta) sint, et hodiè scientes illa pauci inveniri queant; (Daraschakoh) voluit, quòd omnes libros samavi (cœlestes) cum conspectu (in conspectum suum) afferrent, ut ab ipsis illis (eliceret) verbum Alhi (Dei,) quod ipsum interpretatio sui ipsius est; et si in (uno) libro contractum sit, in libro altero fusè expositum inventum fiat, et ex illa fusâ expositione istud compendium scitum efficitur.

'Intuitum super Toret (legem Moysis,) et Andjil (evangelium J. Christi.) et Zabour (psalmos Davidis,) et alios codices conjecit: verùm expositio tohid (unificationis) in illis etiam (libris) compendiosa et enigmatica (tecta) erat; et ex interpretationibus paucis, quas homines à commentariis fecerant, petitum cognitum non redditum est.

'In pede illius fuit (hinc evenit,) quòd, è quo respectu (quâ causâ) in Indoustan, unitatis contemplatore, sermo cinatio tohid (de unifica-

tione) multa est ; et theologis externis et internis sectæ antiquæ indicæ, super vehedat (unitate) negatio, et super mohedan (unitariis) sermo non est ; quin potiùs pes æstimationis (illis) est super ۷۵ (præcipuum ducunt) contradicere (repugnare) insipientibus hujus temporis, qui se ipsos doctos (esse) firmatum dederunt ; et, in pede (victimis) occisionis, et vexationis, et impietatis, et negationis (veri,) Deum cognoscentibus et unitariis lapsis, omnibus verbis tohid (unificationis,) et cuncto (quod è Fourkan laudando, et oraculis authenticis prophetiæ puræ manifestum est, resistentiam ostendunt, (et) viùm latronum viam Dei efficiunt.

' Post à verificatis his gradibus (his cognitis) compertum fuit, quòd in medio hujus tribûs antiquæ, præ omnibus libris samavi (cœlestibus) quatuor libri asmani (cœlestes,) quod, Rak Beid, et Djedjr Beid, et Sam Beid, et Athrban Beid, sit, super anbiaï (prophetas) illius temporis ; quòd major illorum [Brahma qui] Adam sefieullah (selectus à Deo) et (super quem) pax ! est, cum cunctis preceptis delapsi (sint :) et hæc significatio ex ipsis his libris apparens est.

' Et optimum (purior pars) horum quatuor librorum, omnia secreta selouk (religiosi instituti,) et eschgal (applicationum animi) unificationi puræ, in illo contenta sunt ; & illud Oupnekhat nominant.

' Huic (Principi) veritatis indagatori ipsi elucidatæ, cùm intuitus super principium vahedat (unitatis) entis foret (fuisset,) cùm linguâ arabicâ, et syrianá, et cerakanâ (per sika, et) sahnscretâ (samscreticâ,) voluit quòd hæc Oupnekhatha (۷۵ Oupnekhat capita,) quod thesaurus unificationis erat ; scientes illum in istâ tribu etiam pauci manserant ; cum linguâ persicâ (in linguam persicam,) sine minus et plùs, et absque affectu (studio) animi, cum interpretatione, recto (sincero) cum recto, voce cum voce, (de verbo ad verbum) cum translata ostendisset, (fecisset,) intelligerent, quòd hæc collectio (synagoga,) quæ illum librum ab homine islamico (fideli,) hoc quantùm (tantoperè) co-opertum et absconditum habent, hoc quodnum secretum est.

' Et, ut in his diebus, urbs Benares, quæ porta scientiæ hujus tribûs est, dependentiam cum (ab) hoc veri indagatore habebat, ۷۵ Pandetan & Sauiasan, qui completo (convenienti) tempore [۷۵ Beid et] ۷۵ Oupnekhat scientes (facti) fuerant, cùm congregatos fecisset, ipse (Daraschakoh) hoc kholasseh (optimum) unificationis, quod Oupnekhatha, id est, secreta tegenda sit, et monthaï (scopus) petitionis cunctorum aoulia Allah (amicorum Dei) est, in anno mille, sexaginta & septem ۷۵ hedjri, sine affectu animi (studio, è samskreto) translatum cum ostendisset (reddidisset ;) et quodlibet difficile, quodlibet verbum altum, quod volebat et petens illud fuit, et quærebat et non invenit ; ex hoc Kholasseh (optimo) libro antiquo, quod, sine dubio et ambiguitate, primus liber samavi (cœlestis) et fons verificationis (agnitionis pro vero) et mare unificationis est, congruens Korau glorioso, quin imò, explicatio illius est.

' Et manifestè apparens sit, quòd hoc aieteh (comma, versus) genuinè in veritate hic liber antiquus est ; quòd aieteh cum (in) Koran benefaciente, in libro (est) absconditο, non perveniens nisi ad mundatos arab (domino) mundorum : id est, Koran benefaciens in libro est, quòd

ille liber absconditus est, (et) eum comprehensum non faciunt nisi cor quod purificatum sit; et descendere factus (demissus) à nutritore (conservatore) [mundi et] mundanorum: et cui (cuivis) cognitum sit, quòd hoc aïeteh, in veritate, Zabour, et Toret, et Andjil non est; quin imò, è verbo tanzib (descendere facto), hoc modo manifestum efficitur, quòd in veritate, louh mahfouz (tabula asservatorum, cui æterna rerum fata inscribuntur), etiam (aïeteh) non est; (et) cùm Oupnekhat, quod secretum abscondendum, est, principium (originale exemplar) hujus libri sit, et τὰ aïethhaï τῦ Khoran gloriosi, genuinè in illo inventa fiant; proindè cum verificatione (certum efficitur) quòd liber absconditus, hic liber antiquus sit.

'Et ex hoc (libro), cum hoc (huic) fakir (Daraschakoh) non scita, scita; non intellecta, intellecta fuerunt.

'Et, nisi ἀ τῷ (præter) utilitatem capientes fieri, ipsum (Daram) et natos ipsos ejus, et amicos ipsos ejus, et petentes veritatem, petitum et intentum cùm non fuerit; fortunatus, qui, ut affectum animi infelicem (pravum) transire fecit (reliquit), purè (sincerè), cum modo Dei (excelso) hanc translationem, quod cum secreto akbar (per secretum magnum) designatum redditum, translationem (esse) verbi Alhi (Dei), ut scivit, derelictionem partialitatis, ut monstravit, legit et intelligit, sine cessatione, et sine metu, et sine tristitiâ, et liberatus (salvus, beatus), et mavid (confirmatus) (in hoc statu) est futurus.'

We will now proceed to lay before our readers an English version of the above preface, from the Persic original, which will enable them to appreciate the merit of M. Anquetil's.

"In the name of God, the merciful, the compassionate.

Praise to that being, whose antique mysteries are comprised by all inspired writers in the phrase (Bismilla), 'in the name of God,' and thanksgiving, which is the commencement of all books in the sacred Coran, refers to that dread name, which includes the host of angels, the inspired scriptures, the prophets, and the patriarchs.

When Darah Shecuh, the resigned worshipper of God, visited Casmir in the year of the Hegira 1050 (A. D. 1640), by the blessing of the Most High, and the unlimited efficacy of his divine will, he met with Mola Shah, the chief of the learned, the teacher of teachers, the instructor of instructors, the guide of guides, versed in the subtleties of Unitarianism; may he be joined with God!

As that prince already relished the pleasure of seeing the learned of each sect, and of hearing the sublime doctrines of Unitarianism, had perused various treatises of the Susi philosophers, and even composed some himself, the thirst of exploring the Unitarian doctrines (which are a boundless ocean) daily increased, and his mind attained a degree of acuteness and subtlety, which would have been impossible without the immediate assistance and favour of the divine will. Now, the sacred Coran being frequently ob-

scure, and few at this day being found capable of explaining it he determined to read all inspired works; that the word of God might furnish a commentary on itself, and what is concisely expressed in one book, might be elucidated by a reference to others; the abridged by the more diffuse.

With this view, he perused the pentateuch, the gospels, and the psalms; but the unity of God was obscurely and enigmatically expressed in these works; nor did he derive more instruction from the simple translations of hired linguists.

He next desired to ascertain how it happened, that, in Hindustan, the unity of God is the frequent theme of discourse, and that the ancient philosophers of Hind (both those who published, and those who concealed, their tenets) neither denied nor objected to the doctrine of the Divine unity, but, on the contrary, held it as an axiom. Unlike the ignorant race of the present day, who set up for philosophers, though they have fallen into the track of bloodshed and infidelity, denying the attributes and unity of God, and contradicting the proofs of that doctrine derived from the Coran and authentic traditions: these may be considered as the banditti on the path of God.

In the course of this inquiry it was discovered, that, amongst the Hindus, four inspired books were held peculiarly sacred, viz. the Rik Veda, the Jajur Veda, the Sam Veda, and the Athervana Veda, which had descended from the skies to the prophets of those times, of whom Adam (purified by God), may blessings attend him! was the chief, containing rules and precepts; and this doctrine (viz. the unity of God) is clearly expressed in those books.

The essence of those works, which relate to religious rites, and meditations on the unity of God, is comprised in the Upanisada, which was extracted by the prophets of those days, illustrated by copious commentaries and expositions, and has always been read and considered as an excellent epitome.

As the object of this explorer of truth (Darah Shecuh) was not the acquisition of languages, whether Arabic, Syriac, Jraki, or Sanscrit, but the proofs of the unity of the Supreme Being, he determined that this Upanasada, which might be considered as a treasure of Unitarianism, should be translated into Persic, without adding or expunging, and without biass or partiality, but correctly and literally, that it might appear what mysteries are contained in those books, which the Hindus so carefully conceal from Moslems.

As the city of Benares, which is the seat of Hindu science, was a dependency of this explorer of truth (Darah Shecuh), having assembled the Pandits and Saniassis, who are now the expounders of the Vedas and Upanisadas, he caused a translation

to be made of this Upanisada, or mysterious secret, which comprises the object of the researches of so many theologians. This was completed, in an impartial manner, in the year of the Hegira 1067, (A. D. 1656.) Every difficulty, and every sublime doctrine which had occurred before, but could not be explained, was elucidated by this ancient compilation; which, without doubt, is the first of inspired works, the fountain of truth, the sea of Unitarianism; not only consentaneous with the Coran, but a commentary upon it.

It seems evident, that the following text of the Coran relates to this ancient book, viz. 'The holy scriptures are in that book which is concealed; which none can expound but the man of pure heart; and which was sent from the skies by the Preserver of mankind.' Now, this description is not applicable either to the psalms, the pentateuch, nor the gospel; and from the expression, 'sent from the skies,' it cannot apply to the Book of Fate. But the Upanisada, the original of this book, is a very ancient work; a mysterious secret; and comprehends all the conditions specified in the holy text, which doubtless refers to it. From it, this adorer of God knew and understood what before was unknown and incomprehensible. But, exclusive of the benefits resulting from it to himself, his posterity, and friends, let the searcher after truth, laying aside his prejudices, and the pleasures resulting from sensual gratification, dispassionately peruse this translation of the great arcanum as the word of God; and, if he understand it, he will remain free from terror and anxiety, in the perpetual practice of virtue."

Such is the preface of Dara, which we have selected for the amusement of our readers, in preference to any single passage we could have extracted from the work itself. The tenets of the Vedas lie dispersed through the chapters, and are comprised in puerile fables. But we should have thought it our duty to exhibit a summary of those doctrines, had this translation been made from the original, or the Persic version borne such marks of authenticity, as would have justified us in considering this Upanisada as a genuine epitome of the Indian system. It may be proper to state the grounds of our doubts.

Such Persic translations of Sanscrit works as we have had an opportunity of comparing with the originals, are frequently mutilated, and often perverted; the translator seldom succeeds in giving the full meaning of his author, and never catches his spirit. The Moslem Doctors, whom Dara employed to translate the Upanisada, were probably actuated by a very different principle from that of affording a fair representation of a system at variance with their own; the subtleties of Hindû metaphysics would probably be considered as beneath their attention; and the difficulty of

understanding their abstruse doctrines would add to the bias, already strong, of giving an adequate representation. But, this supposition becomes still stronger, when it is considered that the translation was not completed till the very year in which the unfortunate Dara lost his life; so that its publication was probably posterior to the death of that prince, and when Aurengzebe already held the usurped reins of empire. Even the preface we have exhibited, in which the Upanisada is obviously preferred to the Coran, seems to have been written rather with a view to render Dara unpopular amongst his Moslem subjects, than to be the genuine sentiments of a Moslem prince. The impolicy of publishing them by the successor to the throne, affords an additional argument on this head. But let this be as it may, and notwithstanding the assertions in the preface, the translation has evidently been made, not only with a bias, but with a determined intention of reconciling the Upanisada with the Coran. To prove this, we have only to state, that Brahma is said to be Adam in one place, and in another the angel Gabriel; Visnu is Michael; and Mahadeva, Raphael. Whether this work really consists of extracts from the Vedas, or is defaced by Mahometan interpolations, is a point we do not undertake to determine: the following grounds of scepticism may, however, be stated. In an extract, from the Rik, or first Veda, the Atharvana Veda is mentioned, which it is almost certain is of much later date: in another, Crisna, the eighth Avatara, is mentioned, though he, if he lived at all, was contemporary with Vyasa, who arranged and divided the Vedas into their present form, in a much more recent age. These facts are, however, inconclusive; for we are convinced that innumerable interpolations are now incorporated even with the ancient texts of the original.

We have borne a willing testimony to the knowledge M. Anquetil has exhibited of the Persic language: the less agreeable task remains of proving that the intended author of a Sanscrit dictionary, is unacquainted with the language he proposes to explain. We shall not draw our proofs from the many erroneous explanations he has given of Sanscrit terms, in which the public might balance between opposite authorities; but shew that this gentleman knows the words which occur in his text (and which are as common as any in the language), only through the medium of the Persic character. In the Devanagari alphabet, in which all Sanscrit books are written, the sound of G and of K have each a distinct representative: in Persic they are represented by the same character. Hence, Gavalzani is become Kaplkiani; Garga, Kark; Gandharva, Kandherb; Ghian and Aghian, Kian and Akian, &c. Again, the short vowels are omitted in the Persic, though distinctly represented in the Devanagari: hence, the Rik

Veda is Rak; the Jajur, Djedjr, &c. The diacritical points are often omitted: hence, Samudra, the ocean, is Samandr; Budya, knowledge, is Badia; Aditi, the sun, is Adat; Vayu, the wind, Baib; Varuna (the Indian Neptune) Baran, &c. These examples will, we conceive, prove conclusive as to the fact we would establish: we hasten, therefore, to quit this unpleasant topic.

To conclude—We are of opinion, that a translation of an Upanisada, from the Sanscrit into English, would prove a performance of some interest; but that the value of the work before us is considerably diminished, by coming through the medium of a Persic translation. It is still further reduced, by the injudicious plan adopted by the Latin translator; insomuch, that nothing less than the beatitude promised by Darah Shecuh, at the conclusion of his preface, to those who shall read and understand it, could induce any one to persevere in such an attempt, through the medium of M. Anquetil's version.

ART. XIV. *Poems*: By Mrs. John Hunter. London: Printed by Bensley. 8vo. 1802.

THESE poems have some merit; but their beauties are not of the very highest order. They are chiefly remarkable for a modest simplicity, both of thought and expression; and are composed, in general, with an unambitious plainness, that aims only at the natural representation of moderate affection; and escapes the dangers of extravagance, by renouncing all pretension to magnificence, force, or novelty.

There is, in fact, no flow, either of words or of soul, in the compositions of this poetess; no exuberance of fancy, or brilliancy of diction; but a timid and constrained succession of correct and obvious sentiments, in tame and perspicuous language. She neither rises into grandeur, nor sinks into graceful familiarity; and wants not only the energy that is necessary for great undertakings, but the facility by which little ones are performed with applause. Though her subjects are not often very arduous or extensive, she seems afraid to trust herself into them too far: she throws an unassured and faltering hand across the lyre; and, after striking a few ordinary notes, hurries forward to a conclusion, as if embarrassed with her task, or fatigued with the petty exertion.

Though, in general, but little disposed to venture out of the safe and beaten track, she has been sometimes tempted to transgress into originality. The effort, however, seems too violent to produce a very pleasing effect; and it is rather surprise, than admiration, that is excited by such cold and laborious extravagance. We shall quote only the following recipe for making a lamp to burn in the shrine of *Bona Fortuna*.

'It shall be form'd of silent tears,
Slow dropping in the cave of care,
Through the cold gloom of ling'ring years,
Congeal'd to crystal by despair.' P. 58.

The following lines, describing the departure of the gloomy month of November, indicate the same heavy exaggeration, united to a greater degree of obscurity and incoherence.

'Why sudden stops my struggling breath,
Why heaves so strong my aching breast?
Hark! sounds of horror sweep the troubled glade!
Far on a whirlwind borne the fatal month is fled!

'I watch'd his flight, and saw him bear
To Saturn's orb the sullen band;
Where Winter chills the ling'ring year,
And gloom eternal shades the land.
On a lone rock, far in a stormy main,
In cheerless prison pent, I heard the ghosts complain.' P. 4.

Whenever any of Mrs. Hunter's poems, indeed, exceed twenty lines, we commonly find the composition extremely disjointed and abrupt. *La Douce Chimere* is the affected title prefixed to a very indifferent ode to Fancy, in which the following lines, though a little fantastic, shine out among the rubbish of the remainder.

'Thy art can on the moon's beam send
The heart's warm wish from friend to friend,
Through air and ocean's waste.
And on some bright unchanging star,
Though absent long, and distant far,
Remembrance may be plac'd.

'Tis happiness to dwell with thee;
Whate'er we think, whate'er we see,
Glows with a brighter dye;
All nature wears a lively green,
The heav'ns expand a blue serene,
And man forgets to sigh.' P. 10, 11.

In some lines to the memory of Chatterton, we find nothing so remarkable, as the tremendous Alexandrines that close the two following couplets:

'Rapid as thought arose the glowing scene,
Till poverty, despair, and death, rush'd in between.'

And,

'Thy name shall live on time's recording page,
The wonder and reproach of an enlightened age.' P. 22.

Next come five or six birth-day odes to the fair writer's son, which have more of affection and good sense in them, than of poetry or inspiration. They contain some stanzas, however, that are very pleasingly written. They are followed by a short poem 'to her daughter, on being separated from her on her marriage,' of which the following lines are amiable and elegant.

'Yet will it be, as when the past
Twin'd every joy, and care, and thought,
And o'er our minds one mantle cast
Of kind affections finely wrought?
Ah no! the groundless hope were vain,
For so we ne'er can meet again!

'May he who claims thy tender heart
Deserve its love, as I have done!
For, kind and gentle as thou art,
If so belov'd, thou'rt fairly won.
Bright may the sacred torch remain,
And cheer thee till we meet again!' P. 33. 34.

'Carishbrook Castle' is the longest performance in the volume; but we cannot give it much praise. It begins with an invocation to 'the queen of inventive thought,' to 'lend her lightly quivering beams;' and proceeds on the old melancholy system of rousing one of the old inhabitants of the edifice from his grave, to frown and make speeches among its ruins at midnight. The ancient legend of Carishbrook unfortunately contains but a few obscure incidents; and Mrs. Hunter, in spite of her invocation, does not help out their scantiness by any act of invention. King Charles, of course, is the principal figure; but he is very ill drawn; and, though plentifully bepraised and bewailed, excites scarcely any interest in the reader. What, indeed, can be done with such a stanza as the following?

'Why didst thou seek this luckless strand,
Where for thy life the toils were spread?
Hypocrisy rul'd o'er the land,
Good faith and gratitude were fled;
Yet still a loyal few remain'd,
Whose hearts allegiance true maintain'd:
But fate forbade their hope to save,
And led thee through a maze of sorrow to the grave.' P. 45.

The poem concludes with this most lamentable quartain—

'Sure dastard fear must have suppress
The groan which heav'd a nation's breast:
'Tis ours in happier times to prove
The monarch's safety in his people's love.' P. 48.

It would be invidious to quote any more of this lady's alexandrines; but we would be glad to know what she means by 'the pure *endless* universal mind;' or how she proposes to extricate the construction of the following stanza.

> 'See from its centre bends the rifted tower,
> Threat'ning the lowly vale with frowning pride,
> O'er the scar'd flocks that seek its shelt'ring side,
> A fearful ruin o'er their heads to pour.' P. 65.

The 'Songs and Ballads,' many of which have been for some time familiar to the lovers of music, appear to us by far the most valuable part of the publication. They are by no means, however, without great faults. 'The Wandering Lady,' whose song is said to be founded on a true story (though it contains no story at all), addresses her whole ditty to her *sheep*, like any shepherdess of romance.

> 'My sheep, *companions kind and true*,
> Yes, I can feel a pang for you.' &c. P. 77.

We had really imagined that this senseless jargon was out of fashion even with our sweet singers. Throughout the songs, we meet with too many of the feeble expletives of our common ballads. One loving damsel insists upon following her swain abroad,

> 'On all his wandering steps to wait,
> And give the comfort *in her pow'r*.'

This, however, seems to be a favourite phrase; for we find it again. Another damsel complains—

> 'This anxious aching bosom finds
> No comfort in its power.'

Another enters into a hall, full

> 'Of lords, and knights, and ladies fair,
> Who *silent all remain*.'

These lines have not much meaning. There are others, however, that are altogether unintelligible: as,

> 'Where the green ivy twining,
> *Binds round the burn's brow*.'

Or,

> 'Plunge them in seas of melted ore,
> *Crown them with poniards* dip'd in gore.'

The best songs in the book are those that are best known: though there are several which we do not remember to have met with before, that possess very considerable merit. We insert the following:

'Time may ambition's nest destroy,
Though on a rock 'tis perch'd so high,
May find dull av'rice in his cave,
And drag to light the sordid slave;
But from affection's temper'd chain
To free the heart he strives in vain.

'The sculptur'd urn, the marble bust,
By time are crumbled with the dust;
But tender thoughts the muse has twin'd
For love, for friendship's brow design'd,
Shall still endure, shall still delight,
Till time is lost in endless night.' P. 66.

The following stanzas seem to have been composed in imitation of our older song-writers.

'Far, far from me my love is fled,
In a light skiff he tempts the sea,
The young Desires his sails have spread,
And Hope his pilot deigns to be.

'The promis'd land of varied joy,
Which so delights his fickle mind,
In waking dreams his days employ,
While I, poor I, sing to the wind.

'But young Desires grow old and die,
And Hope no more the helm may steer;
Beneath a dark and stormy sky
Shall fall the late repentant tear.' P. 98-99.

There is not much meaning in the succeeding lines; but they are rather pretty.

'O tuneful voice, I still deplore
Those accents which, though heard no more,
Still vibrate on my heart;
In Echo's cave I long to dwell,
And still would hear the sad farewell,
When we were doom'd to part.

'Bright eyes, O that the task were mine,
To guard the liquid fires that shine,
And round your orbits play;
To watch them with a vestal's care,
And feed with smiles a light so fair,
That it may ne'er decay.' P. 103.

Those lines, also, are not without spirit—

'Ah, to forget! the wish were vain!
Our souls were form'd thus fond to be;

No more I'll murmur and complain,
For thou, my love, wilt think on me.

'Silent and sad, I take my way,
As fortune deigns my bark to steer;
Of hope a faint and distant ray
Our far divided days shall cheer.

'Ah! to return, to meet again!
Dear blissful thought! with love and thee!
No more I murmur and complain,
For thou, my love, wilt think on me.' p. 96.

Upon the whole, we are of opinion that this volume will scarcely carry down the name of its author to a very distant generation. The greater part of the pieces it contains may be said to be very decently written: but they are extremely deficient in fire and animation; and are neither calculated to move by their pathos, nor to enchant by their beauty. Mrs. Hunter appears, from her book, to be a very amiable and accomplished woman: but poetry really does not seem to be her vocation; and rather appears to have been studied as an accomplishment, than pursued from any natural propensity. Her verses are such as we might expect from half of our well-educated ladies, if poetry were to be taught, like music or painting, in the ordinary course of female instruction, and odes and elegies exacted at the boarding school with as much rigour as concertos and pieces in crayons.

ART. XV. *Observations on the two lately discovered Celestial Bodies.* By William Herschell, L.L.D. F.R.S. From Phil. Trans. 1802.

OUR astronomical readers are acquainted with the interesting discoveries which have, within the space of a few months, introduced to our acquaintance two new celestial bodies; the one named *Ceres*, by its discoverer Piazzi; the other called *Pallas*, by its discoverer Olbers. Our own indefatigable astronomer Dr. Herschell, who has himself, by his numerous and accurate observations, so far extended the bounds of human knowledge, appears to have directed his attention, without loss of time, to the new and interesting field of observation opened to him by his brethren on the Continent. The results of his first inquiries were, as might be expected, extremely interesting. He found that the magnitude of these supposed planets, or, as he calls them, moving stars, was much inferior to that of the other primary planets, or even of their satellites. Thus he found that Ceres has a diameter only three eighths the diameter

of the moon. In the present paper, besides extending the same observation, and the same conclusions to Pallas also, this excellent astronomer has given us a set of new and accurate observations, tending to establish some very singular and interesting facts. We hold it to be a duty indispensably incumbent on us to present our readers with a sketch of this very valuable paper.

The first remarkable circumstance that strikes us in all the observations, is the great difference between the real magnitudes and the lucid disks. By one measurement with the most delicate micrometer, expressly adapted for the purpose of such experiments, the real diameter of Ceres was found to be only three fourths of the lucid disk; and that of Pallas only two thirds. The angle which the former subtends, was found to be only 0″.38; that of the latter no more than 0″.13. He calculates, by a rough estimate, that the diameter of Ceres is only 161.6 miles, and that the diameter of Pallas is no more than 110½ miles.

From the very small quantity of matter which these bodies contain, we cannot expect that they can have any satellites: accordingly various observations concurred to convince Dr. Herschell that this is consistent with truth. He also determined that Ceres has a visible disk, but that Pallas cannot be discovered to have any. The last set of observations are extremely important for ascertaining the precise nature of the two new bodies. By them it is ascertained, that both the stars have at all times a small coma or haziness, which grows denser near the nucleus.

Our author next proceeds to make his observations upon the result of these inquiries. He begins by defining planets to be celestial bodies of a considerable size and small eccentricity of orbit, moving in planes not very different from that of the earth, in direct curves, at considerable distances from each other, with no atmospheres, that bear any proportion to their diameters, and of bulk sufficient to retain satellites in their orbits. It is evident that, with this definition, the new stars but ill agree. Our author then defines comets to be very small celestial bodies, moving in directions wholly undetermined, and in most eccentric orbits, situated in every variety of position, and having very extensive atmospheres. Although the definition agrees in most particulars with the circumstances of the new stars, it differs in that of the atmosphere, which, in the comets, is at the very least a hundred times greater than the diameter of the nucleus, and in the new stars is only a few times greater. Dr. Herschell therefore maintains, that these bodies are neither referable to the class of comets nor planets, but he gives them the name of Asteroids, which he thus defines:

'Asteroids are celestial bodies, which move in orbits either of little or of considerable eccentricity, round the sun, the plane of which

may be inclined to the ecliptic in any angle whatsoever. Their motion may be direct or retrograde, and they may or may not have considerable atmospheres, very small comas, disks, or nuclei.' P. 229.

Having thus followed the Doctor through his very interesting speculations, we must now proceed to the more invidious, but equally necessary part of our office, and offer a few remarks upon the Doctor's theory; premising, that we rely with the most implicit confidence on the accuracy of his observations, from long experience of his great skill, patience, and fidelity, and from our knowledge of the unrivalled excellence of his instruments. It is to his conclusions alone that we object; and, with all possible deference, we hold ourselves as well qualified to judge of the truth of these, as if we had ourselves made or verified the observations upon which they are founded.

And, first, we must positively object to the unnecessary introduction of new terms into Philosophy. The science of Astronomy is, beyond any other branch of the mixed mathematics, loaded with an obscure and difficult technology. As all nations have been observers of the heavenly bodies, so all languages have contributed to form the nomenclature of the astronomer. Not only are the same bodies indifferently known by a variety of names, but, so defective is the phrasecology, that no one list can be given in two or three languages, or according to two or three systems of mythology. To a person who had resided in ancient Italy and Greece, on the banks of the Nile, of the Ganges and Euphrates, in modern Europe, and amongst the Gothic nations, the astronomical technology might be natural and simple, as it is composed of all the languages spoken, all the mythologies received, and many of the court calendars published in these various countries and distant ages. Knowing, as we do, the great power of words in misleading and perplexing our ideas, we cannot allow the unnecessary introduction of a new term to escape unnoticed. Where a new object has been discovered, we cheerfully admit the right of the discoverer to give it a new name; but we will not allow a needless multiplication of terms, or an unnecessary alteration in the old classification of things, to be either justifiable or harmless, a substitute for real discovery, or a means of facilitating the progress of invention. It remains, therefore, to inquire, whether the circumstances of Ceres, or of Pallas, distinguish them from the bodies formerly known?

We cannot admit the difference of magnitude to be of any importance, while the largest and the smallest planets, Jupiter and Mercury for instance,—the largest and smallest satellites,—the largest and smallest comets, between which the difference of magnitude is still more remarkable,—while all these bodies are several-

ly arranged under the same classes, from considerations wholly independent of their size, it is but a clumsy and cumbersome invention, to arrange a new body under a separate class, from the mere difference of its bulk. The same remark applies, though certainly with diminished force, to the other criterion assumed by the Doctor, the difference in the position of the planes of motion; and most unquestionably, the mere circumstance of wanting satellites, is no distinguishing mark, while so many of the acknowledged planets have none; nor, indeed, is it by any means certain that, as the Doctor seems to think, the mass of matter in the new planets is insufficient to retain secondary bodies in their orbits. The proportion of their distances from the centre of the system, or their proximity to each other, is evidently no better criterion.

In short, if it shall be admitted that comets move in ellipses; that the chief difference between those bodies and planets, consists in the greater eccentricity of the cometic orbits, in the perceptible atmosphere which accompanies them, and in the state of ignition which we have every reason to believe is the cause of that atmosphere; the more philosophical view of the subject would certainly be, to consider both planets and comets as bodies of the same nature, forming different parts of one great system. Indeed, Dr. Herschell himself admits the probability of the comets cooling in the process of time, and their atmosphere diminishing, so as to reduce them to the state of planets in every thing but their magnitude and eccentricity; and he applies the same remark to the case of the new bodies. Such an observation is obviously destructive of the principle of arrangement for which he contends. But whatever may be our opinion upon this subject, or however much we may be disposed to admit the propriety of distinguishing comets from planets; in the present state of our knowledge, the grand circumstance of concentricity is evidently sufficient to authorize a classification of the new bodies under the head of planets; and the discovery of them is chiefly valuable, on account of their coincidence in certain particulars, with the nature of comets, and their differing from those bodies in the extent of their atmospheres, probably in decreased ignition. If it shall be found demonstrated, that the cometary orbits are elliptical, and not parabolic, these new planets will form a sort of link in the system, in consequence of an intermediate step between the greater and the smaller, the concentric and eccentric heavenly bodies. In the meantime we must enter our protest to the formation of a separate class, distinguished by a new and uncouth name.

Such being our opinion, it is of much less consequence to inquire whether the new name of *Asteroid* is the most appropriate

that could be imagined. To us, that name presents the idea of some body resembling fixed stars: whereas the two new planets have no one circumstance in common with those distant bodies. If a new name must be found, why not call them by some appellation which shall, in some degree, be descriptive of, or at least consistent with, their properties? Why not, for instance, call them *Concentric Comets*, or *Planetary Comets*, or *Cometary Planets*; or, if a single term must be found, why may we not coin such a phrase as *Planetoid* or *Cometoid*.

Dr. Herschell's passion for coining words and idioms, has often struck us as a weakness wholly unworthy of him. The invention of a name, is but a poor achievement in him who has discovered whole worlds. Why, for instance, do we hear him talking, in page 220 of this volume, of the *space-penetrating power* of his instrument—a compound epithet and metaphor which he ought to have left to the poets, who, in some future age, shall acquire glory by celebrating his name? The greatest discoverers have scarcely ever immortalized their deeds by efforts of nomenclature. Columbus, Cabral, Gama, and Cook, left the honour of being attached to the regions which they had penetrated, to the impostors who succeeded them, or the princes and saints whom they served.

The other papers of Dr. Herschell, in the late volumes of the transactions do not deserve such particular attention. His catalogue of 500 new nebulæ, which concludes this volume, though extremely valuable to the practical astronomer, leads to no general conclusions of importance, and abounds with the defects which are peculiar to the Doctor's writings—a great prolixity and tediousness of narration—loose, and often unphilosophical reflections, which give no very favourable idea of his scientific powers, however great his merit may be as an observer—above all, that idle fondness for inventing names, without any manner of occasion, to which we have already alluded, and the use of novel and affected idioms. Thus, he begins, by telling us about his *telescopic sweeps*; he then speaks of the *natural history* of the heavens; he then prelects upon the *construction of the heavens*, an expression by which he indeed means nothing more than the arrangement of the fixed stars; but which is immediately founded upon the vulgar notion of the sky being a blue vault, and tends to support that idea. We do not object to the needless phrases of *binary sidereal systems* of *insulated stars*, of *quintuple* and *multiple stars*, of *erratic orbits*, *clustering stars*, *multiple flexures*, *empty centres*, *stellar nebulæ*, *milky nebulosity*, *lacteus chevelure*;—these terms, though useless, clumsy, and confusing, are nevertheless sufficiently consistent and etymological. But what shall we say of such a phrase as a *straight line orbit*? Does not this set all ety-

mology and consistency at defiance: Upon this subject, we shall not further enlarge: but Dr. Herschell must excuse any of his readers, who shall either shut his book in disgust, when he heaps so many useless difficulties in their way, or shall fail to comprehend his meaning, when he thus carefully obscures it, by unintelligible and undefined terms.

To the speculations of the Doctor on the nature of the sun, contained in the last volume, we have many similar objections; but they are all eclipsed by the grand absurdity which he has there committed, in his hasty and erroneous theory concerning the influence of the solar spots on the price of grain. Since the publication of Gulliver's voyage to Laputa, nothing so ridiculous has ever been offered to the world. We heartily wish the Doctor had suppressed it; or, if determined to publish it, that he had detailed it in language less confident and flippant.

ART. XVI. *Principes d'Economie Politique, ouvrage couronné par l'Institut National, dans sa Séance du 15 Nivose, an XI, et depuis revu, corrigé et augmenté par l'Auteur.* Par N. F. Canard, Ancien Professeur de Mathématiques à l'Ecole Centrale de Moulins. Paris. 1801. 8vo.

IN the year 1800, the National Institute of France proposed the following question, as a subject of prize essays: '*Is it true, that, in an agricultural country, taxes of every description fall ultimately on the proprietors of land?*' The problem is highly important, but of very difficult solution. It has attracted the attention of economical authors, both in England and upon the Continent, for more than a century; though prior to the speculations of Quesnai, it can hardly be said to have ever been stated in a very strict form. Since the first publication of that philosopher's discoveries, his famous project of a territorial tax has been the subject of much reasoning among French writers; whose topics on both sides, were so plausible, that the argument was not yet brought to a close, when the distractions of the Revolution suspended for a while the calm discussions of philosophy. It is pleasing to observe, after the tempest has subsided, that the minds of men spring back to the same difficulties which formerly provoked their emulation, and exercised their ingenuity. Amidst, indeed, that undistinguishing reprobation of the past, which in the feelings of the populace has very naturally succeeded to fanaticism and terror, the Economists are confounded with the Jacobins and Anarchists; the enlightened advocates of regulated freedom have been classed with the most criminal disturbers of social peace. But though the name of

those virtuous sages is for a while subjected to unjust calumny, and though their excellent writings may be laid aside or prohibited, the impulse which they gave to the public mind still remains in force. The important questions which they started, again occur for investigation. The reforms of administration, which they recommended, force themselves upon the memory of those who have witnessed a change of dynasty, rather than of system. Even those prospects of political improvement, which flattered the benevolent anticipations of the economists, will soon be recognised as sound conclusions of science: and it will at length be acknowledged that Turgot, and Mirabeau, and Quesnai, were the friends of mankind, and that their genius and their labours were devoted to the refinement of social happiness, and the consolidation of the political fabric.

The prize of the National Institute was adjudged to M. Canard for a Memoir, which, by subsequent alterations, he has formed into the present work. It certainly does not present a satisfactory solution of the question proposed, nor even, in our opinion, an approximation to it; on the contrary, we are inclined to suspect, that the view which he has taken of this subject is in many respects erroneous. His essay, however, is written with considerable ability. From some of the following criticisms, it will probably appear, that he has added nothing to our knowledge of political economy, and that the style and form which he has adopted are not very well calculated either to illustrate or to diffuse truths already ascertained. At the same time, the work will be read with pleasure by those, who, being already masters of the subject, can be gratified with the variety of aspects under which it may be considered, as well as with the comparative state of their favourite science among the learned of different countries.

In conducting his investigation of the problem proposed by the Institute, the author found himself obliged to recur to some of the fundamental principles in the theory of political economy. The truth is, that the equable diffusion, or exclusive incidence of taxes, cannot be ascertained by any direct induction of particular facts; but must be obtained synthetically, after a just analysis, both of price and of the order according to which the annual produce is distributed among the people. M. Canard has therefore given his Essay a more general title than belongs to the question which first suggested it; and he appears, by this title, to have been tempted to introduce several chapters which have no relation to the principal object of inquiry.

In the *first* chapter, the author gives an explanation of fundamental principles; or rather of the sense in which he employs certain terms: for they are stated more in the manner of defini-

tions that are assumed, than of truths to which we are conducted by analysis. He begins with illustrating a distinction between necessary and superfluous labour; by the former, he means that of which the produce is indispensably necessary to the existence and preservation of man, as well as to the continuance or replacement of stock: by the latter, he means that portion which ministers to our superfluous accommodations, and of which the produce, if not consumed in superfluous enjoyment, goes to augment the quantity of accumulated stock. He afterwards proceeds to this position, that every thing which has exchangeable value derives its price from the several quantities of labour that have successively been employed upon it. As different forms of the same proposition, he assumes, that all property consists in so much accumulated labour; and that the exchangeable value of every portion of property consists in the labour which it will purchase or command. What other writers, accordingly, have called accumulated stock or capital, he denominates *travail exigible*; and as every addition to this accumulated stock is derived from the produce of what he has styled superfluous labour, he introduces another epithet into this phrase, denominating accumulated stock *travail superflu exigible*. Proceeding in the application of these terms, he asserts, that all wealth, property, and riches, consist only of *travail superflu exigible*; and that necessary labour being absorbed either in necessary consumption, or in the replacement of capital, can never form a part of the actual mass of riches. In the same style, he lays it down as a principle, that it is the accumulation of unconsumed superfluous labour, which creates all the sources of revenue; from which it follows, that all revenue consists in the profit of this accumulated stock.

In all this, M. Canard appears to us to display very little sagacity. He has, without any necessity, affected to change the established forms of expression; and has confounded principles which are very carefully distinguished in the works from which he evidently derived his information. In asserting that exchangeable value consists of labour stored up, he appears to have preferred the errors of our English writers to the accurate and precise notions of exchangeable value which he might have found in various excellent works, published in his own language; particularly those of M. Turgot and of the Abbé Morellet. But we shall, in another part of this article, enter into a more detailed explanation of the fallacies involved in this supposition. It appears quite a puerile mistake to say, that accumulated stock alone is wealth; and that the produce, reserved for immediate consumption, forms no portion of the mass of riches. Surely, it is the capability of being consumed, that renders any produce a part of

wealth; and if it were necessary to make a distinction, in this respect, between stock already in consumption, and stock accumulated into capital, it would be more natural and more just to say, that the latter indirectly aids the production of riches, while the former itself is wealth. It suggests also a very imperfect view of the subject to say, that accumulated wealth is the *source* of all revenue. It is unquestionably a necessary condition for the reproduction of revenue; but it is only one of several conditions, all of which are necessary. In the theory of national wealth, the natural fertility of the soil, the natural powers of human labour, and the accumulation of capital for the requisite advances, are all of them conditions of which the existence is indispensable to reproduction. It gives but a partial view of the actual arrangements of nature, to fix upon any one of them, singly, as the source of revenue: yet such is the propensity of speculative men to simplify, that each of the three conditions has been separated from the rest for that purpose. The economists selected the first; some other French writers, who have not risen to such reputation, insist upon the second; and M Canard, with less plausibility than either, has affirmed that the source of revenue is accumulated stock. It was an unavoidable corollary from that proposition, to infer, as he has done, that all revenue consists in the profit of stock. But he loses, in this manner, the advantages of that very useful and accurate classification, which distinguishes revenue, according to the three great orders of the people among whom it is distributed, into rent, profit, and wages.

The *second* chapter, on *Money*, is a very trivial one. It contains nothing but what the author might have assumed as familiar to all his readers. The work is certainly not suited to those to whom the subject is entirely new. But this chapter does not even enumerate one half of the propositions, with regard to money, which may now be considered as perfectly well ascertained.

The subject of the *third* chapter is the *determination of the price of commodities.* It opens with a very formal and distinct enunciation of the principle, which we have already noticed in our account of the first, and which assigns the quantity of labour employed on a commodity, as the essential constituent and measure of its exchangeable value. This notion, which is certainly incorrect, is far from being peculiar to M. Canard: it is much employed in the treatise of Smith on the Wealth of Nations, and has the effect of involving, in every great obscurity, all the observations which that profound author has delivered on the analysis of price. An ingenious and very learned economist* appears to have sup-

* Plan for altering the manner of collecting a large portion of the public revenue, &c. By the Earl of Lauderdale.

posed, that this principle originated with Mr. Rice Vaughan, whose excellent discourse on coinage was composed during the reign of Charles I.; but it may be found in writers of a much earlier date, and, to omit the intermediate authorities, is expressly stated and illustrated in a passage of Aristotle's Ethics.* There is, indeed, no necessity of supposing, that any one of these writers borrowed the idea from his predecessors: it is one of those errors which are obviously suggested by our uncorrected notions of natural equity. As it has been admitted without suspicion, into some systematical works which deservedly possess a high reputation, and still continues to infect the reasonings of many politicians, our readers, we hope, will not be displeased that we take this opportunity of explaining our reasons for rejecting it. It is proper that we should transcribe M. Canard's statement in his own language.

'Il s'agit maintenant de déterminer ce qui fixe le prix de ce qui a de la valeur parmi les hommes. D'abord, le prix n'est autre chose que le rapport de valeur d'une chose à une autre; et comme on compare tout a la valeur de l'or ou de l'argent, le prix est le rapport de la valeur de chaque chose à celle d'une quantité déterminée de l'un ou de l'autre de ces métaux. Or, maintenant, quelle est la cause que peuvent déterminer ces différens rapports; ou, ce qui revient au même, quel est le principe qui assigne à chaque chose sa valeur? Il est certain d'abord que, puisque tout ce qui a du prix est le résultat du travail, la valeur d'un objet quelconque doit être en raison du travail qu'il a coûté. Il est certain, en second lieu, que, si tous les hommes étaient bornés aux besoins absolus de leur conversation, si tout leur travail était naturel, et qu'il ne différât que par le temps, ce serait la durée seulè du travail qui en mesurerait la valeur: ainsi les jours et les heures seraient les unités et les fractions d'unités nominales qui détermineraient les valeurs de toutes chose. C'est probablement à de semblables divisions de temps qui doivent leur première origine les unités nominales adoptées chez les différens peuples, telles que le franc, la livre sterling, le florin, etc. Mais les différentes espèces de travail appris présentent une si grande variété dans la valeur du travail, que le temps ne peut lui servir de mesure.' P. 26, 27.

When labour is said to be a measure of exchangeable value, there are two senses in which this proposition may be understood; two ways in which the labour, that is to form this measure, may be estimated. The exchangeable value of a commodity may either be measured by the quantity of labour that had been employed in is own production, or by the labour that had been employed on the commodity for which it has exchanged. According to the doctrine which we are about to examine, these two quantities of labour must have been equal. Those authors,

* Ethic. Nichom. V. c. 8. Edit. Duval.

accordingly, who urge this doctrine most confidently, use, as their measure of value, sometimes the one quantity, and sometimes the other. That the value or price of an article depends on the labour that has been employed in producing it, and that the value or price of an article consists in the labour which it will purchase or command, are stated by them as the same proposition in two forms.

Though it were true, in point of fact, that what is given in exchange for a commodity is just so much labour as was employed in producing the other commodity for which it is exchanged, it would be a nugatory inference, that that labour measures the exchangeable value of the first commodity. The conclusion would reach no farther than this, that, in the exchange of two subjects each measures the exchangeable value of the other; or that the exchangeable value of a certain quantity of any one article, may be measured by the quantity of another for which it is actually exchanged. But, in point of fact, it is not true, that the thing purchased in every bargain is merely so much labour; for the value of the raw material, on which that has been employed, can neither, to use the language of mathematicians, be rejected as nothing, nor estimated as a constant quantity. The value of raw materials, like that of manufactured articles, and of labour itself, varies with the proportion of supply and demand. In some manufactures, indeed, the price of the raw material is, in proportion to the labour employed almost infinitely small: for example, the value of the flax in a pair of lace ruffles, that of the kelp and sand in a vessel of cut glass, that of the iron and charcoal in a steel watch-spring. But, in all these instances, the supply of the raw material is abundant. There are other manufactures, in which the value of the raw material is, in proportion to that of the labour employed, by no means so small. In a shawl of Cashmere, for example, the value of the wool, which is of a very rare kind, greatly exceeds the value of all the labour bestowed in weaving and embroidering it. In the price of a diamond, the whole value of the labour employed by the miner, the lapidary, and the jeweller, may be considered as almost infinitely small in comparison of the value of that labour, if we may use the expression, which nature has bestowed in effecting such a beautiful and rare crystallization of one of her most ordinary substances.

It is equally incorrect to say, that the exchangeable value of a commodity may be measured, or is determined, by the labour that has been employed in its production. That the wages of the whole labour, employed in production or in manufacture, form a component part of price, is an undeniable principle; in other words, that the quantity of the commodity bought must

be adequate to replace, by a circuit of other exchanges, the whole commodities advanced or consumed in the manufacture of the commodity sold. But the proper mode of introducing this principle into the theory of exchangeable value, is, not to state the value of labour as constituting the whole price, or forming an adequate measure of it, but to view it as a condition which limits the eventual supply of each commodity. If the whole quantity of commodities, advanced or consumed in the production of an article, be not replaced by its exchangeable value in the market, the supply of that particular commodity will certainly be so far lessened, until, by the influence of this diminution upon its value, that replacement is complete. But, in the actual exchange of any one commodity for any other, no regard is paid to the quantity of labour employed in producing either; the quantities, reciprocally exchanged, are proportioned by the competition between the supply and demand of both. These are subject to continual fluctuation. If of two commodities, the demand of the one is increasing at a particular time while the supply remains unaugmented, and the demand of the other is diminishing while the supply remains undiminished, it is manifest, that, at the particular time, the respective quantities of the two commodities exchanged for each other may have cost, in their production, very unequal quantities of labour. Quantities of labour, it is probable, very nearly equal, are expended, in order to send to the London market the finest black and the finest blue cloths. But a sudden death in the royal family will raise the price of black cloth to the height of twice or thrice that of blue; one yard of the former will be considered as exchanging for two or three yards of the latter; that is, in the language of which we dispute the propriety, a certain quantity of labour is given on the one side, for twice or thrice that quantity of labour on the other.

It is evident, that all the errors on which we have animadverted, originate in an imperfect view of the real nature of exchangeable value, and of the principle by which it is at all times regulated. We shall, therefore, take this opportunity of stating and explaining its definition.

The value of any commodity is the assignable quantity of any other commodity, for which an assigned quantity of the former may be exchanged. In this respect, every commodity may be considered as exchangeable for every other; and what we call the value of any one may be expressed by assigning a quantity of any other. Under the name of commodities, in this general definition, we comprehend not only rude produce and manufactured articles of every kind, but money, likewise, or the coined metals of every denomination, and labour of every description.

The reciprocal value of any two commodities, that is, the respective portions of each, which are exchanged for one another, is determined in every instance of exchange by competition; or by the proportion between the supply and the demand of each of the two commodities. The exchangeable value, therefore, of any two commodities is liable to vary with the variation of four circumstances, and will depend upon the result of the combined variations of all. These four circumstances are, the demand and the supply of the one commodity, and the demand and supply of the other. Whoever attempts to ascertain the variation of prices from one age to another, must, with respect to every two commodities compared together, take into consideration all of these four circumstances. There can be no doubt, that the exchangeable value of labour, that is, the quantity of corn or of cloth, for example, which is given in exchange for a certain quantity of labour, is regulated at all times by the result of the same four circumstances: the supply of that particular species of labour which is in question, the demand for that particular labour; the supply of the particular kind of grain or cloth in question, and the demand for that grain, or that cloth. All of these circumstances severally affect the reciprocal value of any one kind of labour as exchanged for any one kind of grain, or for any one kind of cloth. Let us take for an example, the labour of a common ploughman, and estimate the exchangeable value of that quantity, which is understood to be included in a day's work, in terms, of one particular species of grain, such as oats. It is evident that the quantity of oats, given in exchange for a day's labour at the plough, will become greater, if there is either a diminished supply of ploughmen, or an increased demand for them; or an increased supply of oats, or a diminished demand for that sort of grain. On the other hand, the quantity of oats, given in exchange for a day's labour at the plough, will become less, if there is either an increased supply of ploughmen, or a diminished demand for them; or a diminished supply of oats, or an increased demand for that sort of grain. In each of these single changes, while the three other circumstances remain permanent, the change of relative price will take place as already described. But two, or more, or all, of the four circumstances may be fluctuating at one time; and the final result of value will depend upon the degree in which the several variations co-operate, or counteract the effect of each other.

Though M. Canard has adopted, in its most unqualified form, the error which we have thus endeavoured to expose, it has not led him to any false conclusions in his account of the manner in which prices are determined. He appears to have contented himself with establishing it absolutely, as an important and fun-

damental truth in political economy; and with an inconsistency, of which he seems unaware, proceeds to derive from the principle of mutual competition the various conclusions which he has arranged, in this fifth chapter, on the subject of prices. It may be inferred, from the details into which we have found it necessary to enter, that he has not stated that principle in the most explicit manner, nor developed all the consequences, with respect to the theory of exchange, which it involves. The style, likewise, in which he has presented the subject, is liable to great objection. He has thought proper to adopt the language and forms of algebra; and several pages, and even folded sheets, are crowded with characters and symbols. It is right that our readers should have a specimen of this, as well as of the other parts of the work. Let the difference between the highest price demanded by the sellers, and the lowest price offered by the buyers, be called L; and let x represent that part of this difference which the sellers are finally content to take in addition to the lowest price; $L-x$ will be that other portion of the difference, which the buyers finally succeed in retrenching from the highest price. Call the desire of the buyers to purchase B, and their competition N; call the desire of the sellers to dispose of their goods b, and their competition n. It is evident that x, the portion of the difference that is paid by the buyers, will increase in proportion to their desire and their competition; x will therefore be in the ratio compounded of B and of N, or will increase as BN. For the same reason, the other portion $L-x$ will increase as bn. We have thus the following proportion, $x : BN :: L-x : bn$, which gives the equation, $bnx = BN(L-x$, from which we get $x = \frac{BN}{BN+bn} L$. He proceeds through twenty pages with this calculation, into which a great many more terms as well as new symbols are introduced; but our readers, we conceive, have already had enough of it.

In its own province, the peculiar language of algebra will never fail to gratify those who can appreciate the admirable structure of the most perfect instrument that has yet been invented by man. But that injudicious and unskilful pedantry ought most severely to be censured, which diverts an instrument from its proper use, and attempts to remove those landmarks by which the sciences are bounded from each other. The peculiar forms of expression, which have been introduced into the modern analysis, are sanctioned by the facilities which they afford, both of perspicuous abridgement, and of prosecuting a train of investigation to new and remote results. But M. Canard has only translated, into a language less readily understood, truths, of which the ordinary enunciation is intelligible and familiar to all. We will not deny that some branches of political

economy, especially those which relate to circulation, money, and the analysis of price, admit of being treated with a precision, which almost approaches to mathematical exactness. But a subject may possess this precision, without requiring, or even admitting, the symbolic representations of algebra. We would not even exclude altogether the use of analogies borrowed from mathematical learning; they afford much delight to those minds which are habituated to pass, occasionally, from the vague conclusions of moral induction, to the full assurance of knowledge in the stricter sciences. Both as illustrations, and as ornaments, such analogies may be introduced with the happiest effect. But the frugal and classic taste, with which Beccaria has interspersed allusions of this nature, forms a contrast to the pedantry and profusion with which M. Canard has overloaded his composition.

The *fourth* chapter treats *of the circulation of money and of credit.* It contains a tolerably correct view of the leading propositions upon that subject; but none of them are presented in a new light, or traced to any new consequences.

In the *fifth* chapter, which is entitled, *on the causes of the increase and the decline of wealth*, he professes to demonstrate, that the prosperity of states has a necessary limit; that industry and economy must ultimately give place to luxurious and wasteful expence; and that nations are destined, by a law of nature, to fluctuate in a series of changes. The opinion is far from being new; he has placed it, however, in a new aspect. The reverses, which are exhibited by the history of the most celebrated states, have suggested this melancholy idea, and, in so early an age of the world as the present, they still give it too much plausibility: yet, it may be doubted, if it be not more agreeable to the just rules of philosophical anticipation, to flatter ourselves with a prospect of unchecked improvements in opulence as in knowledge, than to acquiesce in that mournful analogy which assimilates the political fortunes of a people to the progress of individual life, and subjects to the same law of necessary alteration, the geological surface of our planet, and the prosperity of its diversified inhabitants. Whichsoever of these conclusions may ultimately be verified, one thing at present seems probable, that a just statement of the moral and political destinies of man will involve a wide range of complicated facts, and a most comprehensive view of the circumstances of his nature and condition. Upon this probability alone, we should have suspected the accuracy of M. Canard's reasonings, who compresses the statement into very great simplicity indeed, and resolves the whole explanation into a sort of arithmetical estimate.

The increase of national wealth is occasioned by the permanent excess of the annual produce above the annual consumption; and this excess is determined by the prevalence of economy

above extravagance; of the disposition to save and accumulate, above the passion for expense. When a nation is in this active, healthful, and flourishing condition, it gains from all other nations, according to M. Canard, an annual balance of trade proportioned to the surplus of its produce above its own consumption. This balance must ultimately be paid in the precious metals; and the increase of money, instead of being received into the channels of circulation by an augmentation of prices, is invested as an addition to productive capital or stock. In this, however, there is a natural and necessary limit; in proportion as the balance of trade increases, the competition of capitalists gradually lowers the rate of interest, as well as the profits of stock. But, in proportion as the rate of interest and profit is lowered, there is the less temptation to employ surplus wealth in the shape of capital; and, of course, there is the greater temptation to spend it as revenue. The augmentation of national wealth has a constant tendency, therefore, to discourage the spirit of accumulation, and to encourage the spirit of expense. The latter must ultimately become predominant over the former; the annual consumption will then exceed the annual produce; the balance of trade will be permanently unfavourable; and the nation will be impoverished and ruined, in a progression exactly the converse of that by which it had previously attained to wealth and grandeur. Thus, according to our author, the gradual diminution of profits and interest is at once the effect of increasing riches, and the proximate cause of that growing expenditure which swallows up all riches: and thus nations are represented as if fated to revolve for ever in a circle.

Before pointing out the fallacy of this piece of reasoning, we cannot refain from expressing our surprise, that an author, who appears conversant with the most recent improvements of political science, should assume the reality of a balance of trade; more especially as the supposition does not form an indispensable part of his argument. That decrease in the interest of money and the rate of profits, which he views in so singular a light, might surely take place in a country which confined itself to its own inland trade, studiously avoiding the relations of foreign commerce. And there is no absurdity in believing that the balance of produce and consumption might lean either to one side or the other, in a kingdom bounded, as Berkeley has supposed, by a brazen wall of a thousand cubits. There is no need of a balance of foreign trade, paid in the precious metals, in order to realize that surplus of the annual produce, which, in a thriving country, is added to the mass of accumulated stock. The addition is made by an actual distribution of this surplus among the industrious classes of the people: for the only difference between what he now deno-

minates accumulation, and what we strictly call consumption, is, that the consumers are different; being, in the one case, totally unproductive of value, and, in the other, replacing what they consume.

If, in the foregoing argument of M. Canard, it were true, that the lowering of profits operates as a discouragement to the farther investment of capital, it would not be a just inference, that a progressive decline of national wealth must ensue. We should only be warranted to infer this, that the increase of national wealth had a *maximum*; that there was a point, beyond which the amount of capital, productively employed, could receive no augmentation. Every accession of wealth to the nation, over and above that amount, would be spent and consumed as revenue; because there was no temptation of profit to employ it in the form of stock. But that amount of capital would still be maintained, because, up to that point, there was an adequate profit derived from it. There would be no diminution, therefore, of the national capital, and no progressive decline of wealth. The annual produce and annual consumption would be equally balanced; the condition of the people would be stationary.

But it is very far from being true, that the diminution of profits, which originates in an increased competition of capitals operates as a discouragement to the farther investment of capital. It is in this particular that the author appears to have misled himself through the reasonings of the present chapter. Competition unquestionably regulates profits, as well as the other elements of price. But the only reason why an increased competition lowers the rate of profit, is, that, in consequence of an enlarged capital, the amount of profits, upon the whole, is increased. A greater quantity of stock draws a larger sum of profits; that is, the motive to invest capital increases with the increase of capital. An augmentation of the stock, which is productively invested, is followed by a fall in the rate of profit; only because the actual profits, as now extended, admit of being abridged, without destroying the motive to continue that investment. And this fall of the rate, instead of causing a diminution in the amount of profits, is itself only an effect of these profits having previously been increased, and is, in fact, no more than a return towards their former amount. After a reduction of the rate has taken place, it may be said that the motive to employ a certain specific sum is less than it was. But that forms no objection; because the reduction can only take place, when the circumstances of the country are such, that the stock of all the capitalists has, upon an average, received a proportionate augmentation. That augmentation arises out of an excess of the annual

produce above consumption, which depends upon natural habits of industry and economy, and must, of course diffuse an increase equably among the various individual capitals, of which the national capital is composed.

The present circumstances of the world, in general, or of any particular nation, do not permit us to anticipate a period at which the enlargement of productive capital can be supposed to attain a *maximum*. Such is the re-action of expense and reproduction upon each other, that in order to define that *maximum* in general terms, it would previously be necessary to assign the ultimate limit, both of produce and of consumption. But the prolific virtue of the soil, as well as the effective powers of industry, the numbers of the human species, as well as the multiplication of luxurious wants, have each of them a range of possible extension, which, to our apprehension, must be pronounced indefinite.

We cannot pretend to explain the contents of the *sixth* chapter. It is entitled, *General Point of View*, and is occupied with a long suffocating parallel, between the circulation of merchandize and money, in opposite currents or canals, and, what is held to be perfectly similar, the circulations of venous and arterial blood in the vascular system. It is a simile of about twenty pages, and is introduced, to the indulgence of the reader, by the following expressions.

'On a vu ci-dessus l'espèce de similitude qu'il y a entre la circulation du sang et celle du travail. *Prolongeons* cet aperçu *autant qu'il peut s'étendre*, et analysons tous les traits de ressemblance qu'il y a entre ces deux espèces de circulation. Il est nécessaire auparavant d'exposer le tableau de la circulation du sang.' P. 107.

An offence of such magnitude, against all the rules both of taste and of scientific method, lies beyond the reach of our animadversion, being quite unprovided for in the criminal code of criticism. We shall therefore content ourselves with remarking that scarcely any subject has been more unfortunately exposed to injudicious analogy, than that of the circulation of money. This very title, indeed, involves a false metaphor. In an article of our former number,* we pointed out a singular mistake, into which Dr. Smith has been led, by admitting certain figurative expressions into his reasonings, with regard to paper money. Another proof occurs at present to our recollection, of the folly of indulging in these analogies, however briefly they may be stated. Dr. Smith, in his Wealth of Nations, calls money, 'the great *wheel* of circulation,' and paper-money, 'a new and less expensive wheel.' Mr. Hume says, in his Political Discourses, 'money is *none*

* *Vide* p. 179.

of the wheels of trade; it is the *oil* which renders the motion of the wheels more smooth and easy.

The *seventh* chapter treats of *States in their mutual relations.* It contains a tolerably distinct abridgement of those reasonings and illustrations, by which Dr. Smith has exposed the errors of the mercantile system. We mean to say, that it is immediately abridged from the Wealth of Nations; though M. Canard makes no acknowledgment of this. It was with much pleasure that we found those liberal and enlightened maxims, with respect to the foreign relations of commerce, in a work which has been sanctioned by the approbation of the National Institute. At the present important crisis, the prevalence of such views, among the leading statesmen of France, might prove of permanent and essential benefit to the world.

In the first part of the *eighth* chapter, the title of which is *Taxation*, he professes to resolve very clearly the question proposed by the Institute, to which he gives a decided negative. He endeavours to shew, that taxes diffuse themselves equally over all the different branches of revenue, on whatever branch they may nominally be imposed; and whether they are levied at the source of revenue or upon consumption. But, of this proposition, he has not presented any proof which to us appears satisfactory. He explains his argument by stating a case. The rent of land, he assumes, is settled, like the price of any commodity, by the reciprocal competition of the landlord or seller, and of the farmer or buyer. If, at the moment when they are about to conclude a bargain, the state imposes a tax upon rent, their reciprocal competition will still operate in such a manner that this tax will be equally shared between the two. What is true of the landlord and farmer, is true of all persons in the relation of buyer and seller; and every tax, affecting the subject of sale, will be proportioned between them, whether it be nominally imposed on the one or upon the other. But if this holds with regard to a single buyer and a single seller, a little consideration will satisfy us, that it must hold equally with regard to a succession of many buyers and sellers; and whether the tax be imposed upon the original seller, or upon the first consumer, or upon any one of the intermediate purchasers, it will, in all cases, be proportionally paid by all. Now, this argument is certainly erroneous; inasmuch as it proceeds upon the assumption, that the contract between a proprietor of land and his farmer is exactly of the same kind with a bargain about any vendible commodity. The contrary of this is a point very clearly ascertained; and about which even those writers are agreed, who are most hostile to the project of a territorial impost; and who deny, most confidently, the ultimate incidence of taxes upon the neat produce of land. The

rent which accrues to the landlord, is all that portion of the produce, however great or however small it may be, which remains after the whole stock or expenses of the farmer are replaced, together with their profits at the usual rate. The whole effect of competition on the part of the landlord is, that he shall draw no less than this surplus; the whole effect of competition on the part of the farmer is, that the landlord shall draw no more. But what the amount of that surplus may be, depends neither upon the landlord nor the farmer, but upon the fertility of the earth and the bounty of nature. When a tax, therefore, is imposed, which directly affects the bargain between these two parties, it never can be shared between them; because the farmer already derives no more from the land than the replacement of his stock, with its necessary profits: any part of the tax that he might be supposed to pay would, in truth, form an additional advance, for which it would be necessary that he should be reimbursed. The whole tax is a certain annual expense, a certain portion of capital annually advanced, the whole of which must be replaced out of the annual reproduction, before the surplus or neat produce can be set aside for the landlord. Instead of being shared between him and the farmer, it is wholly deducted from that surplus which constitutes the rent.

We are rather inclined to believe, that the same train of reasoning, which thus proves that all taxes on land are paid by the proprietor alone, requires very little extension, in order to lead us to a more general conclusion, that all taxes whatever ultimately fall on the neat surplus of the annual reproduction. The argument, perhaps, has not yet been stated in such a form as to leave no room for objection; but this proposition appears to us the nearest approximation to truth, that has yet been offered upon the subject. It forms a necessary part, as most of our readers must be aware, of the system maintained by the followers of Quesnai; but, in the examination of that system by its antagonists, and even in the illustration of it by its most intelligent admirers, a line of distinction has not always been sufficiently marked between the theoretical conclusion, or general fact, of the ultimate incidence of taxes, and the practical scheme of a direct territorial tax. For ourselves, we will confess, that while we entertain more than doubts with respect to the expediency of the latter, we have very little hesitation as to the truth of the former. At any rate, the one is not a necessary inference from the other; for, in proceeding to discuss the practicability of that project, other principles and views of political economy must be brought into consideration. Though taxes are finally paid out of the neat produce, it may perhaps be more expedient that they should be drawn from it circuitously than directly: because the productiveness of a tax is not the only circumstance to which a wise states-

man will attend; and because it is not quite demonstrated, that a circuitous tax must be less productive than a direct one.

But although the territorial incidence of all taxes does not appear to suggest necessarily a direct impost upon land, which is the great practical tenet of the economists, it is intimately and necessarily connected with their great theoretical tenet, as to the source of national riches. These two positions, indeed, are involved in each other; or, rather, they may be said to form two views of the same general fact, one of which presents it indirectly. Reflecting upon this circumstance, of the logical relation that apparently subsists between these two assertions, it has sometimes struck us as a sort of presumptive evidence in favour of the economical theory, that each of them had separately presented itself to reflecting minds, long before the French philosophers had incorporated them together in a systematic demonstration. It may be said of all great and permanent discoveries, which have unfolded the operations of nature, that some occasional gleams of light broke out from time to time, before the full truth was revealed. The whole history of the mathematical and physical sciences forms a continued illustration of this remark. Nor does it fail to be true in those branches of knowledge which are supposed to present a less appropriate field of discovery. In the philosophy of the mind, for example, the great fact of association was obscurely perceived by Hobbes, and even by Aristotle; the true theory of abstract signs was almost in possession of the schoolmen; some of the French grammarians had nearly approached that interesting fact in the history of language which Mr. Horne Tooke has the full merit of having ascertained; and, not to multiply instances too much, the two great discoveries by which Mr. Hume and Bishop Berkeley have effected such a memorable revolution in metaphysics, the correct analysis of our ideas of cause, and the precise limitation of our knowledge of external substances, may be traced, the former in the writings of Barrow and Aquinas, the latter in the sceptical system of Democritus. The political economist might adduce similar instances from the history of his science. That doctrine of commercial freedom, the rapid progress of which sheds so much lustre on the enlightened practice of the present age, presented itself to the mind of Fenelon, secluded, at a vast distance from the vulgar details of business, in the retreats of literature and religion; by a still more remarkable coincidence, the same truth was distinctly apprehended and zealously maintained by Sir Dudley North,* who had passed his life in the practical occupations of trade, at a time when the commercial system was loudly and successfully recommended to all the legislatures of Eu-

* We allude to a very remarkable passage in the life of Lord Keeper Guildford, by Roger North, p. 167.

rope, both by merchants and by speculative economists. That principle, with regard to the primary and essential source of wealth, the elucidation of which has given political economy a new form, or rather first given a strict scientific form to that subject, has been detected in some obscure authors, whose names and writings are now only sought after on account of this casual anticipation: it is likewise stated in a much more remarkable manner by a philosopher of antiquity, whose name once exercised a despotic authority, and whose writings have for some time sunk into unmerited neglect.* The curious fact also which suggested these reflections, that oft he ultimate incidence of all taxes upon the neat produce of land, was very distinctly perceived by Mr. Locke. It may be considered, we have already said, as a sort of presumption for the truth of the economical theory, that the two propositions of which it consists, and which are intimately connected with each other, had thus separately and independently occurred to the most cultivated understandings, by which, in former times, the relations of political economy were examined.

The most correct and regular demonstration, therefore, of the territorial incidence of taxes, would consist in a deduction of that evidence on which the fundamental principle of Quesnai's system exists. As the full development of this analysis, however, would occupy a larger space than is consistent with the plan of the present article, we shall present the subject in an indirect form, which, within the limits to which we are confined, may be better adapted to the majority of our readers. We intend to shew, that, in the celebrated treatise of Dr. Smith, though that author denies the ultimate incidence of taxes upon land, the principles which he has established involve this conclusion. That Smith did not precisely distinguish the real import of the economical system, is now confessed, we believe, even by those who agree with him in rejecting it. We are further satisfied that he derived a much larger portion of his reasonings from them, than he himself perhaps recollected; that his principles on the formation and distribution of national riches approached more nearly to those of Quesnai, than he was himself aware; and that, to have recognised an entire coincidence, it was only necessary for him to have followed out his analysis a few steps farther.

In that amusing, but not very instructive part of the Wealth of Nations, which treats of taxation, it is admitted, in the first place, that no tax can fall upon the wages of labour; though even advanced by the labourer, it must be replaced to him by his employer, and is therefore finally paid either out of the profits of stock, or out of the rent of land. It is farther admitted,

* *Vid.* Arist. de Repub. I. 8—12.

that no tax can fall upon the profits of stock: though advanced by the employer of stock, it must be replaced to him either by the consumers in an augmented price, or by the landlord in a diminished rent, or by the monied capitalist in a diminished rate of interest. But the interest of money differs in no respect from the immediate profits of stock; it is precisely of the same nature; and, in the operations of national wealth, is governed by the same rules. All taxes, therefore, whether imposed upon the wages of labour, or upon the profits of stock, are finally paid, either by the consumers in an increase of price, or by the landlord in a diminution of rent. Now the consumers compose the whole population of the state; they can only pay taxes, as they pay all the other parts of price, out of their respective revenues; and these revenues must be derived from wages, from profit or from rent. But no taxes can ultimately fall, either on profit, or on wages; wherefore those, which are levied on consumers, are all ultimately paid from rent. We are thus led, form the admissions of Dr. Smith, to conclude, that all taxes, however levied, are finally incident upon the neat produce, and are ultimately paid by the landlord either in a diminution of his rent, or in an increase of the wages and prices which, out of his actual rent, he distributes among the other classes of the community.

The remainder of M. Canard's eighth chapter is occupied with a disquisition on the best form of taxation, and on the effects with which every new tax is accompanied upon the general system of circulation. The observations which compose this disquisition, though in our opinion fundamentally erroneous, will be useful in suggesting to the reader several points of view, from which the theory of finance, may, with advantage, be considered. The author's conclusions, however, are all derived from that principle of the equal diffusion of taxes, on which we have already stated our opinion. It has conducted him to several results, which, though by no means new, are very different from the ideas in which the most judicious writers on finance appear at present to acquiesce: such as, that the most expedient taxes are those which are imposed upon the necessaries of the poor; that in whatever manner a tax be placed, its effects upon the various branches of industry, and employments of stock, will ultimately adjust themselves in a perfect equilibrium; that until this equilibrium is restored, every tax must be attended with the various inconveniences that result from an artificial derangement in the system of competition and exchanges; and that, therefore, every old tax is good, and every new tax pernicious. Some of these positions appear inconsistent with each other; and all of them might be shown, from various considerations, to be full of error. But it is unnecessary, we hope, to enter into a more formal confuta-

tion of them, than that which is implied in the remarks we have already made on the principles from which they have been derived by our author.

The *last* chapter treats of the *Funding System*, and presents a mixture of judicious observations, with some very unsound maxims of policy. The practice of loans, or anticipations of the public revenue, is justified by the expediency of distributing unusual advances over a succession of years, both in order to equalize the annual expenditure, and to secure a prompt supply upon occasions of emergency. With reference to the practicability of the funding system, M. Canard considers nations under several different points of view; as territorial, and as commercial states; and, under each of these two aspects, as in a stationary, advancing, or declining condition. For the remarks which he has brought together in this discussion, we must refer our readers to the original work, in which they will derive some instruction, and some amusement, from the geometrical precision with which he successively considers the several cases in this series of suppositions. The most prominent and the most objectionable of his positions is deduced from those reasonings, contained in the fifth chapter, of which we have already endeavoured to expose the fallacy. As nations, according to him, may acquire a surplus of wealth above what can possibly be employed as capital, and as it is this surplus which destroys the national spirit of accumulation, and undermines the national prosperity, the funding system, or the art of loans, presents itself as a most salutary expedient for absorbing the superfluity; and, by consequence, for retarding the commencement of national decline. Every loan, therefore, (for M. Canard cannot refuse a metaphor), is a wholesome bleeding, which relieves the political body from a plethoric malady. And he does not scruple to deliver it as his opinion, that if it had not been for these financial operations, by which England has accumulated her immeasurable debt, the superabundance of wealth would long ago have plunged her into that course of decline, from which, even in spite of her funding system, she cannot long be preserved. After the strictures which we formerly made on the principle from which these conclusions are derived, we deem it unnecessary to offer any further repetition of them. They appear a match to any of the speculative follies to which the national debt has given birth. When we consider at once M. Canard's attachment to professional forms, and his unquestionable knowledge of the principles of political economy, we may reasonably be surprised that these consequences, on the subject of the funding system, did not strike him as a *reductio ad absurdum* of his theory, with regard to the necessary decline of national wealth.

Upon the whole, if we leave this work with a favourable impression, it is less from any permanent utility which we conceive it to possess, than from the specimen it affords of the talents of the author. He shows a more extensive acquaintance with economical speculations, than has always appeared in the books that have recently been brought to this country from France; though we have found it necessary, on several occasions, to point out errors which more accurate reading would have enabled him to avoid. There is also a considerable degree of ingenuity in the turn which he has given to certain discussions*; but we do not find that his peculiar mode of considering them has conducted him to any new results, or has enabled him to make any addition to our stock of political truths. Some advantage, however, is gained by a careful and even minute examination of such publications; because we are forced to recur to our first principles, and to undertake a scrutiny of the propositions in which we have formerly acquiesced. By frequent retrospects of this kind, we are placed in firmer possession of the discoveries that have been made; and the boundary of our real acquisitions is more accurately delineated. It has been the aim of the foregoing criticism to assist such of our readers as may be disposed to examine, in this strict manner, the memoir of M. Canard.

ART. XVII. *The Bakerian Lecture on the Theory of Light and Colours.* By Thomas Young, M. D F. R. S. Professor of Natural Philosophy of the Royal Institution. From Philosophical Transactions for 1802. Part I.

AS this paper contains nothing which deserves the name either of experiment or discovery, and, as it is in fact destitute of every species of merit, we should have allowed it to pass among the multitude of those articles which must always find admittance into the collections of a Society which is pledged to publish two or three volumes every year. The dignities of the author, and the title of Bakerian Lecture, which is prefixed to these lucubrations, should not have saved them from a place in the ignoble crowd. But we have of late observed in the physical world a most unaccountable predilection for vague hypothesis daily gaining ground; and we are mortified to see that the Royal Society, forgetful of those improvements in science to which it owes its origin, and neglecting the precepts of its most illustrious members, is now, by the publication of such papers, giving the countenance of its high authority to danger-

* The doctrine of the balance of power as deduced by Vatell, from similar grounds. *Vide* Droit des Gens, Liv. iii. chap. 3. § 44, & seq.

ous relaxations in the principles of physical logic. We wish to raise our feeble voice against innovations, that can have no other effect than to check the progress of Science, and renew all those wild phantoms of the imagination which Bacon and Newton put to flight from her temple. We wish to recal philosophers to the strict and severe methods of investigation pointed out by the transcendant talents of those illustrious men, and consecrated by their astonishing success; and, for this purpose, we take the first opportunity that has been presented to us, of calling our readers' attention to this mode of philosophising, which seems, by the title of the paper now before us, to have been honoured with more than the ordinary approbation of the Council.

The author of this paper introduced himself to the literary world, by a few desultory remarks upon a theory which he appeared to think new, but which had been previously exposed and refuted—the muscularity of the crystalline lens. Soon after this, he retracted his opinion; and a year or two ago he again brought it forward. We do not know whether or not he has once more abandoned it: but we seriously recommend to him a due reflection upon the fact in the history of his opinions, which we have just now stated. Let it teach him a becoming caution in the *publication* of his theories. A discovery in mathematics, or a successful induction of facts, when once completed, cannot be too soon given to the world. But as an hypothesis is a work of fancy, useless in science, and fit only for the amusement of a vacant hour; as its excellence depends upon its simplification and agreement with every fact that can occur; as it requires continual polishing, touching and retouching, in order to adapt it to the phenomena, the inventor comes precisely under that description of persons to whom the Roman satirist uttered those memorable injunctions, '*Sæpe vertas stylum*'—and '*Nonum prematur in annum.*' To justify the apparent severity of these strictures, we quote, in the author's own words, a few specimens of his vibratory and undulatory mode of reasoning.

In the present paper, page 43, we meet with the following sentence:

'I am sorry to be obliged to recal here the assent which I was induced to give, at first sight, to a late author.' Vide *Phil. Trans. for* 1800. p. 28.

And, in another paper of Dr. Young in this very volume, we meet with the following passage, page 393.

'The colours of mixed plates suggested to me an idea, which, it appears, leads to an explanation of the dispersion of colours by refraction, more simple and satisfactory than that which I advanced in the last Bakerian lecture.'

And again, in page 395, there is another correction or modification, as our author is pleased to call it, of another supposition in the same paper. It is difficult to argue with an author whose mind is filled with a medium of so fickle and vibratory a nature. Were we to take the trouble of refuting him, he might tell us, '*My opinion is changed, and I have abandoned that hypothesis: but here is another for you.*' We demand, if the world of science, which Newton once illuminated, is to be as changeable in its modes, as the world of taste, which is directed by the nod of a silly woman, or a pampered fop? Has the Royal Society degraded its publications into bulletins of new and fashionable theories for the ladies who attend the Royal Institution? *Proh pudor!* Let the Professor continue to amuse his audience with an endless variety of such harmless trifles; but, in the name of Science, let them not find admittance into that venerable repository which contains the works of Newton, and Boyle, and Cavendish, and Maskelyne and Herschell.

These remarks lead us to observe that perpetual fluctuation and change of ground is the common lot of theorists. An hypothesis which is assumed from a fanciful analogy, or adopted from its apparent capacity of explaining certain appearances, must always be varied as new facts occur, and must be kept alive by a repetition of the same process of touching and retouching, of successive accommodation and adaptation, to which it originally owed its puny and contemptible existence. But the making of an hypothesis is not the discovery of a truth. It is a mere sporting with the subject; it is a sham-fight, which may amuse in the moment of idleness and relaxation, but will neither gain victories over prejudice and error, nor extend the empire of Science. A mere theory is in truth destitute of all pretensions to merit of every kind, except that of a warm and misguided imagination. It demonstrates neither patience of investigation, nor rich resources of skill, nor vigorous habits of attention, nor powers of abstracting and comparing, nor extensive acquaintance with nature. It is the unmanly and unfruitful pleasure of a boyish and prurient imagination, or the gratification of a corrupted and depraved appetite.

If, however, we condescend to amuse ourselves in this manner, we have a right to demand, that the entertainment shall at least be of the right sort—that the hypothesis shall be so consistent with itself, and so applicable to the facts, as not to require perpetual mending and patching—that the child which we stoop to play with shall be tolerably healthy, and not of the puny, sickly nature of Dr. Young's productions, which have scarcely *stamina* to subsist until their fruitful parent has furnished us with a new litter; to make way for which, he knocks on the head, or more barbarously exposes the first.

Our readers are well acquainted with the name of Euler. They probably know also how inadequate his success as a natural philosopher was to sustain the high fame which his mathematical achievements had gained to him. His optical hypothesis of vibrations has been universally rejected, since the moment it was first published. But, in an evil hour, it fell in Dr. Young's way, some time during the year 1800; and, that it did not light in a barren place, we are entitled to conclude, from the Doctor having already produced no less than three huge papers upon it. The object of the one now before us, as well as the author's notions of philosophising, may be conveniently gathered from the following passage.

'The object of the present dissertation is not so much to propose any opinions which are absolutely new, as to refer some theories which have been already advanced, to their original inventors, to support them by additional evidence, and to apply them to a great number of diversified facts, which have hitherto been buried in obscurity. Nor is it absolutely necessary, in this instance, to produce a single new experiment; for of experiments there is already an ample store, which are so much the more unexceptionable, as they must have been conducted without the least partiality for the system by which they will be explained. Yet some facts, hitherto unobserved, will be brought forward, in order to shew the perfect agreement of that system with the multifarious phenomena of nature.'

We read this passage without much emotion, unless perhaps we might be inclined to pity the misguided pursuits of an ingenious man, who seems to have systematised into a sort of theory the method of wasting time. The following passage, however, excited somewhat of a livelier interest.

'A more extensive examination of Newton's various writings has shewn me that he was in reality the first that suggested such a theory, as I shall endeavour to maintain; but his own opinions varied less from his theory, than is almost universally supposed: and that a variety of arguments have been advanced, as if to confute him, which may be found, nearly in a similar form, in his own Works and this by no less a mathematician than Leonard Euler, whose system of light, as far as it is worthy of notice, was either, or might have been wholly borrowed from Newton, Hooke, Huygens, and Malebranche.'

Those who are attached, as all may be with the greatest justice, to every doctrine which is stamped with Newtonian approbation, will probably be disposed to bestow on these considerations so much the more of their attention, as they appear to coincide more nearly with Newton's own opinions.

A little farther acquaintance, however, with the Doctor's paper has convinced us, that he is as little scrupulous in his quotations, as in his theories; that he delights as much to twist an

authority, as to torture a fact; and, according to his usual vibratory method, after a second examination of the Newtonian writings, has changed the opinion which his first perusal gave him of their signification: a still farther examination of those difficult and sublime speculations of a real philosopher, will make the Doctor acquainted with the nature of his theory, and induce him to abandon the Eulerian hypothesis, if he continues to admit it on the supposition of its being stamped with Newton's authority. Whilst we state this, we are far from meaning to admit the criterion of authority appealed to by our author. We hold the highest authority to be of no weight whatever in the court of Reason; and we view the attempt to shelter this puny theory under the sanction of great names, as a desperate effort in its defence, and a most unwarrantable appeal to popular prejudice. But nothing can be more manifest than that Dr Young grossly mistakes the opinion of Sir Isaac Newton, in order to obtain the apparent sanction of his authority for his theory. In what light that modest and cautious philosopher viewed the hypothesis of an ether, we have had an opportunity of shewing in our last Number.* It is evident from his own words, which we have there quoted, that the existence of this medium is only stated by him as a vague hypothesis, which deserved no credit, unless for its applicability to a few facts. If the most elaborate theory had been detailed by Newton upon this subject, still it would have become Dr Young to have considered, whether Newton ranked it among his propositions or his queries; whether he placed it among those things which he gave as proof, or amongst the hints which he threw out for farther investigation. Now, it will be observed, that almost all the quotations made by Dr. Young are from the Queries subjoined to the 3d Book of the Optics; a few only are taken from his earlier papers in the Philosophical Transactions; none are to be found in the Principia; and the only mention of such a thing, which we meet with in the Optics, is accompanied with an express caution against believing that this is given as any thing but a mere hypothesis, intended to assist the imagination of those who, as Newton observes, can conceive nothing without such suppositions.

Let us attend to the concluding words of the Principia, where, talking of this hypothesis, he says, '*Neque adest sufficiens copia experimentorum, quibus leges actionum hujus spiritus accuratè, determinari et demonstrari debent.*' Lib. 3. Schol. Gen. In the same memorable passage he tells us, *hypotheses non fingo; seu metaphysicæ, seu physicæ, seu qualitatum occultarum, seu machinicæ*

* P. 163.

in philosophia experimentali, locum non habent. And in the introduction to the Queries in the third book of the Optics, he tells us, that *he leaves them as materials for further search to others.* It is scarcely possible to conceive a wider difference than that which subsists between the philosophy of Newton and the philosophy of Dr. Young. While the former utterly rejects hypothesis, and asserts that our stock of facts upon the subject of the ether is insufficient; the latter says, that we have enow of experiments, and that we only require to have a stock of hypotheses. Newton proposes queries for the investigation of his successors. Dr. Young claims the inheritance, and vainly imagines that he fulfils this destination, by ringing changes on these hypotheses, arguing from them, as if they were experiments or demonstrations, twisting them into a partial coincidence with the clumsy imaginations of his own brain, and pompously parading, what Newton left as hints, in a series of propositions, with all the affectation of system. After all, it may be said, Newton amused himself with hypotheses, and so may Dr. Young. Admitting that the doctor's relaxations were the same with his predecessor's, it must be remembered that the queries of Newton were given to the world at the close of the most brilliant career of solid discovery, that any mortal was ever permitted to run. The sports in which such a veteran might well be allowed to relax his mind, are mere illeness in the raw soldier who has never fleshed his sword; and though the world would gaze with interest upon every such occupation in the former, they would turn with disgust from the forward and idle attempts of the latter to obtrude upon them his awkward gambols.

We shall add but one remark upon the absurdity of supposing that the idea of an ether, thrown out at random by Sir Isaac Newton, has the smallest affinity with the clumsy theory of Euler, and of his commentator Dr. Young. After demonstrating the properties of the rays of light, considered as hard and minute bodies, in order to explain the theory of vision, and the colours of thick and thin plates, or to shew how the law of the *fits* discovered by induction, might be fancifully resolved into a still more general law without any induction—he amuses himself by conjecturing how the rays of light would act upon, and be affected by, an ethereal, subtile medium, were the existence of such a fluid ascertained. That the concession of such an existence would enable us to resolve a variety of facts, apparently anomalous, into one general, and uniform, and sufficiently simple law, no one can entertain any doubt, who has read the passages in which this fanciful supposition is pursued by that great genius—great even in his most playful relaxations. But the clumsy hypothesis of Euler and Dr. Young is, that the ether itself constitutes light; and their object is to twist the facts into some sort of an agreement

with what they conceive might be the laws of this fluid. From such a dull invention, nothing can be expected. It only removes all the difficulties under which the theory of light laboured, to the theory of this new medium, which assumes its place. It is a change of name, it teaches no truth, reconciles no contradictions, arranges no anomalous facts, suggests no new experiments, and leads to no new inquiries. It has not even the pitiful merit of affording an agreeable play to the fancy. It is infinitely more useless, and less ingenious, than the Indian theory of the Elephant and Tortoise. It may be ranked in the same class with that stupid invention of metaphysical theology, which, in order to account for the existence of evil, supposed the independent existence of an evil spirit; or that other notable contrivance, which, to explain the power of the Deity over matter, ingeniously supposed that all matter was the Deity.

Having, in general, stated our opinion of the merit which the theory may be allowed to possess, and endeavoured to shew that it finds no support whatever from the Newtonian writings, we shall not detain our readers with entering into any farther argument upon the paper now before us. The doctor supports what he is pleased to call his propositions, partly by loose and strained reasoning, partly by reference to the demonstrations to be found in other authors. By a singular figure of speech—a sort of licence which we presume is peculiar to the dealers in hypotheses, the doctor refers to an unpublished work of his own, under the title of '*Young's Syllabus.*' By a still more singular condescension, he tells us, in p. 48, that it would be invidious, without necessity, to enumerate all the unsurmountable objections to the Newtonian theory of light; and although he insinuates that Sir Isaac Newton was but a sorry philosopher, and that he, Dr. Young, has suddenly overthrown his system, he candidly admits that Sir Isaac was a tolerably good maker of experiments.

We take our leave of this paper, with recommending it to the Doctor to do that which he himself says would be very easy; namely, to invent various experiments upon this subject. As, however, the season is not favourable for optical observation, we recommend him to employ his winter months in reading the *Optics*, and some of the plainer parts of the *Principia*, and then to begin his experiments by repeating those which are to be found in the former of these works. If, after that, the making of discoveries and building of systems should appear as easy as he seems at present to think it, he may proceed to apply the skill which he has learned, with that caution which becomes a true philosopher; and give the results to the world with a no less becoming modesty, of which the Newtonian writings may have afforded him the most signal examples.

ART. XVIII. *An Account of some Cases of the Production of Colours not hitherto described.* By Thomas Young, M. D. &c. From Philosophical Transactions for 1802. Part II.

WE are sorry to find that Dr. Young is by no means more successful in making observations and experiments, than in forming systems. The new case of colours, which he affects to have discovered, has been observed a thousand times; and he has only the merit of giving an absurd and contradictory explanation of it. They are the coloured images which appear to surround a luminous body, when a hair is interposed near the eye. The Doctor says, that they arise from the interference of two portions of light, the one reflected from the fibre, the other bending round its opposite side. How this could ever produce colour, we have not sufficient fancy to discover; but this we know, that it is mathematically impossible for any portion of light to bend round one side of a hair, so far as to cross the shadow, and interfere with, or come near the light reflected from the other side. Indeed, it is absurd to talk of reflection in this case. For any reflection would manifestly carry away the light to a very different quarter. It is equally ridiculous to talk of flexion; for how should it happen that, according to the Doctor's own account, (page 388.), a black hair did not produce the appearance? The Doctor's singular explanation should apply to this, as well as any other hair. In fact, these images are produced by refraction; and, accordingly, any opaque body is incapable of forming them. The observation in page 389, we have reason to think accurate, that the fringes or images extend across the image of the hair, dilated by indistinct vision. This is manifestly inconsistent with any idea of reflection or flexion; it will apply to refraction only. Now, Dr. Young seems altogether to have forgot that there is such an operation as refraction: for he ascribes the halos in the atmosphere to inflection among the particles of water. It is evident that the light must be refracted in passing through these particles; nor has this ever been doubted since the days of the famous Archbishop of Spalatro.

We are next presented with some observations upon what the Doctor calls the colours of mixed plates. These are certain fringes produced by the interposition of air or water between plates of glass. Why this should be reckoned a new case, and dignified with a peculiar name, when it is only an inelegant form of the Newtonian experiment, we are utterly at a loss to comprehend. It is referred, however, to what the Doctor calls his '*general law of interference*;' a part, he says, of the undulatory system. He tells us, page 393, that he predicted the appearance of a white, instead of a black spot, if a medium of a middle

density between that of the true surrounding *media* were used by reflected light. He adds, that he verified this prediction in a manner which he announces with no small pomp.

'And I have,' says he, 'now the pleasure of stating that I have fully verified this prediction, by interposing a drop of oil of sassafras between a prism of flint glass and a lens of crown glass: the central spot seen by reflected light was white, and surrounded by a dark ring. It is, however, necessary to use some force, in order to produce a contact sufficiently intimate; and the white spot differed, even, at last, in the same degree from perfect whiteness, as the black spot usually does from perfect blackness.'

Can any thing be more evident than that this appearance is precisely the one described, at least a dozen of times, in the Optics? When two optic glasses are gently pressed upon one another, we are told by Newton that the point of contact is white, surrounded with a dark ring; the same appearance happens, when a thin plate of water is viewed by reflected light. In such cases, a greater pressure makes the rings of colours emerge, by altering the thickness of the plate; and a still greater degree of pressure, by rendering the plate thinner and thinner, produces blackness: *Vide* Optics, B. ii. part 1. Obs. 1. & 4.—Indeed, the first words that strike our eye, upon turning to this celebrated induction of facts, are, '*Next to the pellucid central spot, succeeded*, &c. Obs. 4. parag. 2. That it should not be perfectly white, we may easily expect, when we consider that some of the light is transmitted by a thin plate, in the same manner as total blackness is prevented by the partial reflection which takes place from the thinnest sort of plate. The two appearances are, in fact, precisely the same. For the same spot which appears blackish by reflected, is found to be whitish by transmitted light, and *vice versa*.

From what he calls the *prismatic analysis*, the Doctor explains the blue colour of the lower part of a candle flame. The following sentence contains a singular specimen of confusion, and of vague reasoning.

'We have only,' says he 'to suppose each particle of tallow to be, at its first evaporation, of such dimensions as to produce the same effect as the thin plate of air, at this point, where it is about one ten thousandth of an inch in thickness, and to reflect, or perhaps rather transmit, the mixed light produced by the incipient combustion around it; and we shall have a light completely resembling.' &c. p. 396.

The colours of flame are, it appears to us, susceptible of the most satisfactory explanation, from the doctrine of the different flexibility of light now universally admitted. The least refrangible rays being the most flexible, are most strongly attracted, and adhere with greatest force to those of the inflammable body, or of

the oxygen, whichever we suppose to be the origin of the light given out during combustion. When the application of heat, and the union of the oxygen, precipitates the light, it is obvious that those particles will be first given out, which adhered with the least force: therefore the colour of the flame will first be violet or blue. A greater force will drive off the yellow and green also, and the flame will then assume a colour composed of a mixture of these five, violet, indigo, blue, green, and yellow. Last of all, by a still greater heat, those particles will be disengaged which adhere the most strongly, namely, the orange and red; and the flame will now assume a colour which is composed of a mixture of all the seven, that is to say, white, in which the yellow predominates. Such appears to us to be the simple explanation of this interesting phenomenon, of which the colours of the candle-flame form a particular case. We have no objection to submit to the judgment of our readers, whether Dr. Young's solution, or ours, is the most entitled to their favour; and shall at present conclude with remarking, that our explanation will apply to the different colours of flame produced by different mixtures, as, the barytic salts, which tinge flame red—cupreous salts, which give it a green and blue colour—nitrates, which tinge it yellow and red; and also to the predominance of particular permanent tinges in the flames of certain combustible bodies. As bodies of different colours always reflect and transmit most copiously the rays that produce those colours: so, it may perhaps be found, that the general law of relative flexibility receives modifications from the particular affinities between the particles of light, and those of inflammable bodies, as the powers of gravitation and adhesion are affected by the force of elective attraction. A wide field of discovery may thus be opened, and our knowledge infinitely extended, of the nature of the minute particles of bodies, and the chemical properties of light.

We cannot conclude our review of these articles, without entreating, for a moment, the attention of that illustrious Body, which has admitted, of late years, so many paltry and unsubstantial papers into its Transactions. Great as the services are which the Royal Society has rendered to the world, and valuable as the papers have been in every volume, (not less valuable, surely, since the accession of the present excellent President), we think on the benefits which it has conferred, with feelings of the warmest gratitude. We only wish that those feelings should be unmingled by any ideas of regret, from the want of selection, to which we are adverting; and that it should cease to give its countenance to such vain theories as those which we find mingled in this volume, with a vast body of important informa-

tion. The Society has, indeed, been in the habit of stating, that the truth and other merits of the speculations which it publishes must rest with their respective authors; but we are afraid this is not sufficient. The Society publishes these papers, meets for the purpose of reading them, calls them its Transactions; and, in fact, exercises in many cases, the power of rejecting the papers which are offered. It is in vain, therefore, to disavow a responsibility which so many circumstances concur in fixing. The public will always look upon the Society as immediately responsible for the papers which compose its Transactions, unless, indeed, it shall wish to be degraded into the rank of a mere mechanical contrivance for the printing of miscellanies. We implore the Council, therefore, if they will deign to cast their eyes upon our humble page, to prevent a degradation of the Institution which has so long held the first rank among scientific bodies. Let them reflect on the mighty name which has been transmitted to them—

———'*Clarum et venerabile nomen*
'*Gentibus, et multum nostræ quod proderat urbi.*'

Such a name may indeed shelter them in their weakness, and make us venerate, even in the frailty of old age, an Institution illustrious for its ancient virtue: But is it impossible to ward off the encroachments of time, and to renovate, in new achievements, the vigour of former years? It is more honourable to support an illustrious character, than to appeal to it for shelter and protection.

ART. XIX. *Petri Camperi Icones Herniarum.* Editæ à Sam. Thom. Sœmmering, Francofurti ad Mœnum, apud Varrentrapp è Denner. 1780. 14 Plates, Royal folio. 3l. 3s.

PROFESSOR Camper was one of the few anatomists who seem to have perceived distinctly the very intimate relation which subsists between a minute knowledge of Anatomy, and the Pathology and Practice of Surgery. Of this he has given numerous proofs in his valuable writings. His plates of the human *pelvis*, published in 1760, still remain the most perfect specimen of surgical anatomy which has yet been given to the world. The reputation which this author had so justly acquired during his lifetime, by the bold, accurate, and scientific delineations of his pencil, will not suffer any injury from the appearance of this posthumous publication.

In commencing the present work, it seems to have been originally the intention of Camper, to have given the pathology and chirurgical treatment, as well as the anatomical history of *Herniæ*. His attention, however, had been diverted from that object; for

he appears to have proceeded but a little way, even in the anatomical description.

The only species of *Hernia*, delineated in these plates, is the *Inguinal*, or Bubonocele; and of this disease, besides the more usual appearances, Camper has exhibited some very curious, and, it would seem, by no means uncommon varieties. As the merit of the present work rests chiefly, if not solely, on the fidelity, accuracy and judgment with which the parts concerned in Bubonocele are represented, it becomes necessary to enumerate the contents of each particular plate, and to point out whatever appears to be useful or new in this graphical history of the disease.

Pates I. & II. exhibit a view of the abdomen of an ape (*cynocephalus*) laid open, to shew the entrance of the spermatic vessels into the upper and external aperture of the abdominal ring.

Plate III. A view of the origin of the cremaster muscles in the small animal, and of their distribution on the outside of the *tunica vaginalis*, with the cavity of the *tunica vaginalis* laid open, to show the manner in which this membrane is reflected over the *testes*.

To a student of human anatomy, those three plates are very uninteresting. They increase greatly the expense, while they add little, if any thing, to the value of the present work. Plates of this kind would more properly have had a place in a work on comparative anatomy; and we regret much, that, instead of these plates, Camper had not given similar views of the parts concerned in Bubonocele in the human subject; as such a representation would have formed a more natural, and, at the same time, much more useful introduction to the morbid appearances delineated in the present work. The passage of the spermatic vessels through the abdominal ring, and their relative connection with the surrounding parts, have never been well delineated; and plates, exhibiting the distribution and attachments of the different parts of the tendon of the external oblique muscle, still remain a *desideratum* of no small importance in the anatomy and pathology of femoral *hernia*. Camper, indeed, has given a view, somewhat of the kind we require, in his *Demonstrationes Pathologicæ*, plate I. fig. 1. of the *Pelvis*; but it seems to have been his intention, in that plate, to represent the course of the blood-vessels and nerves in the cavity of the *Pelvis*, rather than to trace the spermatic vessels along their course out of the abdomen, or to mark the more common outlets of the intestines or omentum in *Herniæ*.

Plate IV. exhibits a view of a *Hernia* of the right side, complicated with Hydrocele. The skin of the groin and scrotum is dissected off, and turned aside, to show the dilatation of the abdominal ring, and the membrane into which the cremaster muscle is inserted. A portion of this membrane is removed at the lower

part, to bring the hernial sac into view, where it rests on the *tunica vaginalis*.

Plate V. fig. 1. The same *Hernia* as in Plate IV. with the parts dissected, so as to show the mouth of the hernial sac, and the situation of the spermatic and epigastric vessels. It is by marking precisely the situation of these vessels with regard to the mouth of the sac, that Camper has given to this plate no common degree of value. The epigastric vessels are seen passing along the posterior part to the internal angle of the sac, where they are reflected upwards, to be distributed on the *Rectus* muscle.—This view of the neck of the sac would have pleased us still more, had it been entirely from within, and had it exhibited the parts surrounding the neck of the sac in their connection and relative situation. Fig. 2. of this plate, a very useful little diagram, to show still more distinctly the course of the epigastric arteries behind the mouth of the Hernial sac, and at the same time behind the spermatic vessels. This situation, Camper remarks, occurred in all the subjects he dissected.

Plates VI and VII. The *Parietes* of the abdomen, cut and turned downwards on the right side, so as to bring into view the course of the epigastric vessels on the *Rectus* muscle, and the entrance of the spermatic vessels into the upper and internal aperture of the abdominal ring. On the left side, a scrotal *hernia* is shown, with the integuments removed, so as to bring the sac into view, over which, at the upper part, the external pudical artery is seen passing. The distribution of the aponeurotic fibres, covering the tendon of the external oblique muscle, is extremely well represented in this plate, together with the share which these fibres have in forming the upper and outer part of the external aperture of the ring, and in producing the stricture in cases of strangulated *hernia*.

Plate VIII. fig. 1. The same *Hernia* as in the former plate, but with the parts more dissected. In the subject from which this plate is taken, a variety occurs in the situation of the spermatic vessels, with regard to the Hernial sac. While the *vas deferens* runs, as usual, at the back and inner part of the sac, the spermatic vessels are seen separated from this vessel, and running on the fore and outer part of the sac. Fig. 2. a similar view, from a different subject; in which the situation of the spermatic vessels and *vas deferens* is reversed; the *vas deferens*, in this case, lying before, and the spermatic vessels behind the hernial sac. From the appearances in these two figures, Camper very justly infers, that the incision in operating for Bubonocele should not be carried down to the bottom of the sac; otherwise, when this distribution of vessels occurs, the spermatics, or *vas deferens*, or both, may be wounded by the knife.

Plate IX. contains two figures, exhibiting a view of the distribution of the cremaster muscles upon the cellular membrane covering a Hernial sac of the right side. The formation on the stricture at the ring, from the decussation of the fibres of the *aponeurosis*, becomes still more evident from this, than from any of the former plates.

Plates X. and XI. The oblique and transversalis muscles, with their tendons, removed from the fore part of the abdomen, to show that the Hernial sac is a process of the *peritoneum*. The epigastric artery and vein are seen coming from the back part of the neck of the sac to its internal angle. Camper remarks, that he had often observed the peritoneum thickened and contracted in the part forming the neck of the sac; so that the strangulation seemed, in those cases, to have been occasioned, partly by the stricture in the ring, and partly also by that in the neck of the sac. It is obvious, from the inspection of the first figure in plate XI. that the stricture at the ring may be removed by cutting in one of three directions; namely, by carrying the knife upwards, in a direction parallel to the *linea alba*, inclining towards the spine of the *ilium*, or inwards to the *linea alba;* and it is equally obvious, from the inspection of the same figure, that if the surgeon, in dilating the ring, carries his incision towards the *linea alba*, that the epigastric vessels would be in hazard of being cut; but that, if the incision be directed upwards, or outwards, these vessels are, by their local situation, secure from danger.

Plate XII. exhibits a view of the same *Hernia* with the two former plates; but, in this view, the sac is raised and turned outwards, to show that the spermatic vessels lie before the epigastric, at the back part of the neck of the sac.

Plate XIII. contains two figures; the first, representing a Hernia of the right side, complicated with Sarcocele, in which the blood-vessels of the groin, and the origin and course of the external pudicals, are more fully traced than in any former plate. The pudicals are seen coming off about two inches below the epigastrics; the artery from the trunk of the femoral artery, and the vein from the saphena. Camper imagined, that the division of these vessels had often been mistaken by surgeons for a wound of the epigastric artery. Fig. 2. of this plate exhibits a sketch of the relative situation of the crural vessels, and of the external aperture of the abdominal ring. One can scarcely view this sketch, without regretting that Camper had no opportunity, as he himself acknowledges, of making a careful dissection of a case of femoral *Hernia*. The situation of the crural ring below the pillar of the tendon of the external oblique muscle, and on the inside of the crural vessels, is most accurately represented in

this diagram. We were much pleased to observe exhibited in this sketch also a peculiarity in the distribution of some of the tendinous fibres of the inferior pillar, which we imagined had escaped the notice of former anatomists. Camper has represented these fibres as crossing the back part of the external aperture of the ring. In the subjects we have examined, this appearance is more evident in females than in males; and the peculiarity of this structure serves obviously to strengthen the parietes of the abdomen, and to prevent the occurrence of *Hernia* at this part.

Camper has thrown into the 10th and 11th plates four small figures which illustrate some collateral points relative to Congenial Hernia and Hydrocele of the *tunica vaginalis*; but as these figures appeared, during his lifetime, in an Essay which he published on the causes of rupture in new-born children, it becomes unnecessary to give any particular account of them in this place.

Plate XIV. contains figures of different kinds of pads for Herniary bandages. There are none of the contrivances in this place either very new or very useful. It seems, however, but just to add, that the proper construction of herniary bandages, and the mode of applying them, so as to produce the greatest possible effect in preventing the descent of *Herniæ*, were points upon which Camper had at different times bestowed much time, reflection, and labour.

From the very full enumeration which we have given of the contents of the *Icones Herniarum*, it must be apparent to every one acquainted with the history of Bubonocele, that the most important practical conclusion, or rule of conduct, with regard to operating in this disease, to which these plates lead, relates to the direction in which the surgeon is to make his incision in dilating the abdominal ring. The uncertainty which has prevailed among operators with regard to the relative situation of the Epigastric artery, and the neck of the Hernial sac in Bubonocele, and the very contradictory directions which have been given, down to the present day, by authors and by public teachers, as to the course in which the incision ought to be made, in order to avoid this artery, render these posthumous plates of Camper extremely valuable and interesting. In his *Demonstrationes Pathologicæ*, published in 1760, Camper had indeed described, in the most accurate manner, the situation of these vessels with regard to the neck of the sac; and this discovery has been claimed, so late as 1799, by an author, under a borrowed name, whom it would be unjust to suppose ignorant of what Camper had written; but still the point was not made so obvious to our senses, as it is in the present plates.

We cannot omit to mention, that Camper has been led into a singular inconsistency, by denying, in that work, the possibility of wounding the Epigastric artery in dividing the neck of the sac, though some surgeons of great eminence had been candid enough to acknowledge, that this very fatal accident had actually happened in their practice. How the possibility of wounding the Epigastric artery should have been questioned by Camper in his *Demonstrationes Pathologicæ*, seems very unaccountable; since it is not only apparent, from the inspection of the present plates, and which, it may be remarked, were engraved before the publication of that work, that this artery comes round from the back part to the inner side of the neck of the sac; but Camper has even given a plate, to show, that if the incision be directed towards the *linea alba*, the epigastric artery must of necessity be divided. It is also not a little singular, that, in this mistake, Camper should have been copied by the author to whom we formerly alluded; who seems not to have been satisfied with having taken from him the merit of a more valuable observation.

Of the division of the Epigastric artery in the operation for Bubonocele, there are, as has been already remarked, several well authenticated instances upon record; and it may be presumed, that, for one instance which has been acknowledged, many have occurred that have been altogether overlooked, if not carefully concealed. Rougemont, the learned translator into French of Richter's very valuable treatise on Hernia, very justly remarks upon this subject, that the cases of divided Epigastric artery, of which we have an account, occurred to those surgeons who, in dilating the neck of the sac, were in the practice of directing their incision towards the *linea alba*.

Before concluding our account of Camper's most valuable work, we think it right to observe, that though the relative situation of the Hernial sac, and of the Epigastric artery, be, in general, such as is represented in his plates, yet cases sometimes occur, in which this situation is reversed, and in which the Epigastric artery is placed on the outside, instead of the inside of the neck of the sac. This situation which has been repeatedly noticed, occurs in a variety of Bubonocele, that has not, so far as we know, been accurately described by any author; a variety, in which the intestine included in its Hernial sac, does not enter into the upper and internal aperture, nor pass along the canal of the abdominal ring, but where it appears to come directly out of the abdomen, at the lower and external aperture of the ring. This case, which has been much oftener observed than properly understood, occurs, it is true, but seldom. Camper, in the essay to which we formerly alluded, mentions, that in opening, in 1769, the body of a person who had been murdered, he perceived a *Hernia*, which

passed out of the abdomen, between the upper and internal aperture of the ring and the *linea alba*, but which seemed to him to proceed externally from the ring. Michaelis, in the sixth volume of Richter's *Chirurghische Bibliothek*, mentions, that he had seen in London, a preparation of Inguinal *Hernia*, in which the Epigastric artery was situated on the outside of the neck of the sac. And Erlich, in his *Beobachtungen*, also mentions, that he had seen a similar preparation in the possession of Mr. Cline. This situation of the artery had so often occurred to Dessault, that he actually gives marks by which to ascertain its existence. It is almost superfluous to remark, that, in this variety of Bubonocele, the Epigastric artery must necessarily be divided, when the incision is directed towards the spine of the *ilium*. If we are not mistaken in our conjecture, it was this deviation from the usual course of nature, and the casual division of this artery, which has occasioned all that diversity, and even contrariety of opinion, which has hitherto prevailed among surgical writers, with regard to the real situation of the Epigastric artery in Bubonocele; and of course, with regard to the direction in which the incision should be made in dilating the abdominal ring.

Art. XX. *Gulielmi Heberden, Commentarii de Morborum Historia & Curatione.* Commentaries on the History and Cure of Diseases. 8vo. Payne. London. 1802.

IT may be ranked among the distinguishing characteristics of the present age, that the authority of prescription is openly disavowed, and that inquiry is carried on without any regard to great names, or established reputation. That the *practice of medicine* should partake of this liberal spirit of investigation, cannot surprise any one acquainted with its history; and it ought not to be regretted by any, since the abilities displayed, and the discoveries which are made, must ultimately tend to its improvement. Physicians no longer perplex themselves in fruitless attempts to reconcile the inconsistencies of systematics and sectarists, but each one is content to read with his own eyes in the book of Nature, which lies open before him. It seems now beginning to be understood, what indeed reason and example might have taught us long ago, that the science of medicine can only be improved by observation and experience, by attending to the particular phenomena in the animal body, both in health and disease, and tracing their general laws. Systems are easily framed, and quickly multiply: hence, in every age, the number of theorists has been great, while that of accurate observers has been very small. Hence, we have had innumerable theories of diseases, of the action of remedies, of digestion, secretion, and other

functions in the body, without their authors being acquainted with the connexion, or successive series of changes, in any one instance, all of which they pretended to explain. The new hypotheses which have been proposed, and the old and forgotten, which have been revived at different periods, have all been found inadequate to explain these phenomena; and they have all had the common characteristics of being unfounded, or unintelligible.

In opposition to theoretical speculations, much has been said on the value of *experience*; but this term has been frequently misapplied. The name of experience is commonly given to that knowledge which is acquired by frequent intuition of the same object. If this principle in the practice of medicine were well founded, it would only be necessary to visit all the hospitals in Europe, to become a good practitioner; and an old nurse would be preferable to an intelligent physician. But a distinction has properly been made between what is called *true* and *false* experience. The former supposes, for its attainment, an historical knowledge of its object, a capacity for observation, and a genius to draw proper conclusions; whilst the latter consists only in following a blind routine, without reason, and without reflection: in this respect, the enlightened physician is distinguished from the ignorant pretender; and the rational empiric from the mischief-working, contemptible quack. Partial as we are to facts and observations, yet there appears to be some danger in the present fashionable doctrine of inculcating an exclusive attention to them, by which means we lose the advantages of a regular induction and legitimate theory: and the practice of physic, instead of being studied as a science, will be considered only as a mechanical art; and perhaps only followed as a trade.

These reflections were suggested by the perusal of the work now before us, in which the venerable and learned author has given us many valuable and useful observations, both general and particular. Yet the utility of these would have been increased, if they had been more systematically arranged, by the execution of that comprehensive and regular design, which the author mentions in his preface. It is much to be regretted, that this part of the work has been left unfinished: But observations recorded with such accuracy and precision, as those now under our consideration, are so rare and important, that we are highly indebted to those who collect them, and can only lament that the number of these collectors is so small.

'Nec minimum meruere decus, vestigia Græca
Ausi deserere, et celebrare domestica facta.'

These commentaries are published in Latin and in English, each apparently written by the original author. In the Latin copy, some account is given of Dr. Heberden's life, and also a dedication; both of which are omitted in the English copy, and this omission is supplied by a preface.

Most of Dr. Heberden's remarks on the history of diseases are such as are to be found in the writings of our best practical authors; but they are no where more plainly stated, or more free from useless and irrelative matter. The remedies which he mentions are few; and he bestows very slight commendations upon any. His practice, for the most part, seems to have been feeble and inert, or what is usually called *palliative*. His confidence in the powers of medicine was limited, whilst he relied much on the powers of nature. When we consider the situation in which Dr. Heberden was placed, and notice the class of patients among whom he practised, perhaps we may be able to account for the origin of his opinions. For the diseases among the higher orders of society are less frequent and less violent, than amidst the lower ranks; and, in the former, a dietetic plan of treatment will often effect what must be attempted, and is often produced, by the powers of medicine among the latter. As the plan of this work is so general, it is impossible to abridge it, or give a connected view of all its contents. A few specimens of the author's style and reasoning will therefore be selected, and some remarks offered upon those points, where there is room left for a difference of sentiment.

In the *first* article Dr. Heberden has given some remarks on '*Diet*,' and the regimen to be attended to in most diseases. His observations appear judicious and valuable, and form a striking contrast to the absurd rules and hurtful restrictions formerly laid down by medical writers, who seem to have endeavoured to pervert Nature by their misapplied attention to those circumstances, which they characterised by the perverted appellation of *Non-naturals*.

Under the title of '*Ratio Medendi*,' we find some observations on the employment of Peruvian bark in inflammatory diseases, which, being somewhat peculiar, deserve to be quoted.

'The Peruvian bark has been more objected to than any other of those medicines in cases of considerable inflammation, or where a free expectoration is of importance; for it is supposed to have, beyond any other stomach medicine, such a strong bracing quality, as to tighten the fibres still more, which were already too much upon the stretch in an inflammation; and its astringency has been judged to be the likely means of checking or putting a stop to expectoration. All this appeared much more plausible when taught in the schools of physic, than pro-

bable, when I attended to fact and experience. The unquestionable safety and acknowledged use of the bark in the worst stage of an inflammation, when it is tending to mortification, affords a sufficient answer to the first of these objections; and I have several times seen it given in the confluent small-pox, without lessening, in any degree, the expectoration.' P. 11.

This opinion is contrary to the general sentiments and experience of our best practitioners, whose concurrent testimony on the bad effects of bark in inflammatory complaints has led them to relinquish altogether its exhibition in such cases. To say that bark is serviceable in the worst stage of inflammation when it is tending to mortification, is no argument in favour of its utility in the earlier stages of inflammatory diseases. Such are the changes and endless variations in the human body, that a remedy which is dangerous one day, may be the most proper to be administered the next. If we adopted our author's mode of reasoning, we might condemn bleeding, as hurtful in *pneumonia*, because it hastens the death of the patient, when employed in the advanced stage of the disease; and we might condemn the employment of cold water in fevers, because it is injurious when employed during the cold fit. The controversy respecting the identity of *Scarlatina* and *Cynanche Maligna*, seems now nearly decided. The most general opinion is, that these two states are only modifications of the same disease; and our author's testimony must be considered as no small corroboration of the truth of that idea.

'From the foregoing description of the scarlet fever and malignant sore-throat, it seems highly probable that they are both names of the same distemper, with some little variety in a few of the symptoms: and this opinion is confirmed by our finding that they are both epidemical at the same time. Even in the same family, where a number of children have been ill, either together, or immediately after one another, some have had the distinguishing symptoms of the scarlet fever, and others of the malignant sore-throat.' P. 28.

On the subject of '*Gout*,' there are many remarks, particularly interesting and important. Dr. Heberden had numerous opportunities of marking the varieties of this singular affection; and he has opened some new views which well deserve attention. The following observations, though inculcating a doctrine which is somewhat unpopular, appear just and well-founded, and will be deemed important by all unprejudiced physicians and patients.

'Strong wines, and in no small quantity, have the reputation of being highly beneficial to gouty persons: which notion they have very readily and generally received, not so much perhaps from a reasonable persuasion of its truth, as from a desire that it should be true, because they love wine. Let them consider that a free use of

vinous and spiritous liquors peculiarly hurts the stomach and organs of digestion, and that gout is bred and fostered by those who indulge themselves in drinking much wine; while the poorer sort of mankind, who can get very little stronger than water to drink, have better appetites than wine drinkers, and better digestions, and are far less subject to arthritic complaints. The most perfect cures, of which I have been a witness, have been effected by a total abstinence from spirits and wine and flesh; which, in two or three instances, have restored the helpless and miserable patients, from a state worse than death, to active and comfortable life; but I have seen too few examples of the success of this method, to be confident or satisfied of its general utility. P. 47.

In the method of cure, our author thinks that gout ought to be treated more as an inflammatory complaint; that evacuations may sometimes be employed with advantage; and that it is unnecessary to cover the limbs so closely with flannel as is usually done.

Of the medicinal virtues of the 'Bath and Bristol waters,' Dr. Heberden speaks with an academical kind of faith; he considers the former as useful in some cases of *Dyspepsia*, &c.; but thinks their powers have been much over-rated. In treating of '*Calculus Vesicæ*,' some rules are given for forming a diagnosis between a stone in the bladder and a diseased state of the prostrate gland. The best criterion between these two maladies, our author thinks, is the effect which a schirrus of the prostrate has upon the general health. Those afflicted with it have many constitutional symptoms, such as, loss of strength, want of appetite, quick pulse, &c.; whereas stone patients have frequent remissions of pain, and show no signs of their general health being affected when the paroxysm is off. Another diagnostic mark is mentioned, p. 391, that, in a diseased prostrate, the pain precedes, and in the stone it follows the making water. In page 86, our author remarks, that the pain arising from a stone, depends more upon its figure and position, than upon its size. From what we have observed, we are inclined to think, that the degree of pain felt depends not so much upon the figure or position of the stone, (the latter of which will probably in most cases be the same), but upon some peculiarity in the constitution of the patient, and upon the chemical composition of the *calculus* itself. In some patients who have suffered excessive pain, the stone has been found, on operating, to be very small and smooth; while in others, who have not suffered so much uneasiness, the stone has been large and uneven, or several stones have been extracted. The *calculi*, consisting of earthy phosphates, are observed to occasion less pain than others; and it is those which are generally very large, and have been known to remain many years in the bladder, producing little or no uneasiness. Dr. He-

berden does not seem to have been acquainted with the late successful chemical investigations into the nature and composition of urinary *calculi*. His commentaries were probably finished before the discoveries of Dr. Wollaston, Vauquelin, and Fourcroy, were made public. Although no *specific* has been discovered against this formidable complaint, yet our lately acquired knowledge will be sufficient to guard us against the deceptions of ignorant quacks, and to point out at least a rational mode of attempting the cure. It is obvious, that the solvent power of alkalies is not to be depended on in all cases, but can only be successful when the stone consists of *uric* acid, while the acids are to be employed to dissolve the earthy phosphates. It may be necessary, also, to vary the exhibition of both acids and alkalies in different stages of the same complaint, since the several ingredients which these substances can dissolve, enter into the composition of the same stone.

We cannot allow ourselves to pass over the article '*Carbuncle*,' without offering a few remarks; because we conceive that the nature and treatment of this disease is not well understood; and because our author's opinion seems liable to several objections.

'Carbuncle is a large, red tumour, usually appearing in the back, with a spongy base, loaded with a purulent liquor, oozing out plentifully at any cracks or openings which it finds. Soon after the tumour begins, there comes on a considerable degree of fever, with great inquietude and loss of strength, of appetite, sleep, and flesh: so that it has many marks of being the cause or effect of some extraordinary derangement of the health. Old persons, and shattered constitutions, are the usual subjects of this malady. . . . . As much bark should be given as the patient can take without loathing, and as much of an opiate as the inquietude and want of sleep may require.'

That carbuncle is either the *cause* or the *effect* of some derangement in the system, no one can deny, because it is always accompanied by some such derangement; but the question is, whether we are to consider the constitutional symptoms as producing, or produced by, the local affection? and upon this determination our method of treatment must depend. In most cases, the disease is certainly, in its early stage, entirely local, and to be treated by topical remedies and the antiphlogistic plan. The practice of making patients swallow large quantities of bark and wine, from the idea that carbuncle is always a malignant disease, has often proved prejudicial, especially in full and plethoric habits, in which this complaint frequently occurs; whilst the opposite plan of treatment has been attended with complete success. But perhaps it is impossible, on this, as well as upon any other diseases, to lay down any general rule of conduct, applicable to all cases.

Dr. Heberden considers '*Diabetes*' as a complaint which seldom occurs; but the melancholy experience of late years has shown, that it is by no means so rare as was formerly supposed. His remarks refer chiefly to *diabetes insipidus*; and his conjecture appears well-founded, that the peculiar state of the urine is only a symptom of some other distemper; because this state may be absent or entirely removed, and yet the other symptoms continue, and the patient falls a victim to the disease. In the method of cure, there is little novelty of remark: we find no mention made of animal diet; which has lately been so triumphantly recommended. The success of this plan, however, has not been confirmed by more ample experience; and a rational theory of *diabetes*, and a successful mode of curing it, must still be reckoned among the *desiderata* in medicine.

'*Erysipelas*,' our author considers, as partaking more of a malignant than inflammatory nature, and as not requiring evacuation. His opinion, no doubt, was formed by long and extensive practice; but it must be received with some limitation. The history of *erysipelas* affords a striking instance of the contradictory opinions of medical writers, occasioned by their observations being confined to the places where they practise. Diseases are influenced and modified by a variety of circumstances; by local situation, by the habits and condition of patients, &c.; which ought always to be considered when judging of the proper mode of cure. Thus, to give an example in the present instance. *Erysipelas*, in Edinburgh, is almost constantly attended with strong inflammatory symptoms, and is cured by bleeding, purging, and the antiphlogistic remedies; whilst, in London, the fever which attends it, is of the low typhoid nature, and requires the most powerful tonics and stimulants to prevent the accession of gangrene.

In treating of the method of cure in fevers, particular stress is laid upon the advantages of blisters.

'A headach is a very distressing symptom in the beginning of fevers; for which a blister between the shoulders is an almost certain specific. In the inflamed sore-throat, pleurisies, and peripneumonies, blisters are likewise of great use in abating (perhaps by diverting) the inflammation; and in all stages of low fevers, where they act as cordials, and stimulate the powers of life to exert themselves, and to shake off the languor by which they are oppressed.' P. 176.

With respect to the use of bark, our author seems to have formed his opinion many years ago, when the minds of practitioners were strongly prejudiced in favour of the febrifuge qualities of this valuable medicine; but which have since diminished. The free admission of cool air is strongly recommended; but no notice is taken of the employing cold water, as an external or in-

ternal remedy. It was left to the boldness and judicious experience of modern times, to adduce the affusion of cold water in continued fevers. A remedy which may fairly be put in competition with all the febrifuge compounds in our pharmacopœias; and only requires to be more generally employed to have its value and importance more highly appreciated.

Under the article '*Ileus*,' are some remarks on hernia, which we apprehend are no less false in theory, than unfounded in fact, and appear deduced from very limited observation. We shall quote our author's words:—

'When the inflammatory colic is joined with a rupture, it is right to reduce the rupture, if it can be easily done; but it is doubtful whether such pains should be taken about it; for it is uncertain, that the rupture is the seat or the cause of the inflammation. An ileus is often seen without a rupture, and a rupture without an ileus; and, consequently, the symptoms may go off, though the rupture continue; just as, without this, they often come on: and the symptoms have continued and ended in death, notwithstanding the reduction of the rupture. Be the case as it will, all violent means to reduce the hernia will be more likely to aggravate, than to relieve the disease. We know that a hernia does not necessarily hinder the operation of purges; and if their effect be but copious, the patient may be secure of his recovery. The operation of dilating the ring with a knife, and by that means freeing the gut from the stricture by which it is supposed to be strangled, is, as far as I have observed, very rarely, if ever, advisable, as well upon other accounts, as for all the reasons which have been just mentioned.' P. 273.

This opinion is not merely a matter of speculation, as it leads to important practical conclusions; and the adoption of it may prevent recourse being had to those means of relief, so necessary in a disease, where assistance by art is so much and so often required. Can one read the cases recorded by Pott, by Arnaud, and by Richter, and say that the greatest attention ought not to be paid to the reduction of hernia, in the cases of ileus with which it exists? Strangulation of some part of the intestines is one of the most general causes of inflammation of the bowels, and ought always to be suspected, as, from a species of false delicacy, it is often concealed. To the reduction of this, all our efforts should be assiduously and strenuously directed. The operation by the knife is not so hazardous or painful as supposed; and the only reason to be assigned for the ill success which so frequently attends it is, that it is usually had recourse to only when all other means, after repeated trials, have failed, and too often, probably, when symptoms have arisen, which the reduction of the intestine is not able to remove.

There are some valuable facts stated under the article '*Phthisis Pulmonum*,' which well deserve the attention of those who are

daily publishing their premature triumphs, of having discovered the grand arcanum for curing consumptions. It would be well, if those authors paid more attention to the diagnostic marks of tubercular phthisis, and not flatter us with the hopes of removing the disease by those remedies which they employed to cure another.

Many other passages might be selected: But enough, we trust, have already been quoted, to shew that these commentaries contain a rich fund of curious and valuable facts, and must be considered as a very acceptable legacy to every tyro and every student of practical medicine. Before concluding, however, this article (already protracted to a great length), we must observe, that some traces of a peculiar phraseology are to be discovered in the course of Dr. Heberden's work, which the improved state of our knowledge might have been supposed to have removed. The following passage, which forms the author's last reflection in his conclusion, appears so singular, that it deserves to be transcribed.

'The art of healing, therefore, has scarcely hitherto had any guide, but the slow one of experience, and has yet made no illustrious advances by the help of reason: nor will it probably make any, till Providence think fit to bless mankind, by sending into the world some superior genius, capable of contemplating the animated world with the sagacity shewn by Newton in the inanimate; and of discovering that great principle of life, upon which its existence depends, and by which all its functions are governed and directed.' P. 483.

If no progress can be made in the art of healing, till another Newton arises to proclaim that *great principle of life*, and determine its laws, our expectations of improvement must surely be very hopeless. The discovery of Newton was not the discovery of a cause, but the generalization of a particular fact; and the term *gravity* is employed to express that law by which the planets are regulated and bodies fall to the ground, in the same manner as the word *life* or *vitality* is employed as a general expression for the phenomena observed in certain bodies which we call *organized*. The laws which regulate these bodies are equally fixed, and some of them equally well known as those of the motions of the solar system: and the causes of the changes which take place in the one, are not more inexplicable than the motions observed in the other. The questions concerning vitality bear the same relation to the study of physiology, and the practice of medicine, as the metaphysical discussions concerning the materiality, or immateriality of the soul, to the phenomena of mind; and as speculations have been wisely abandoned in the latter case, we may readily relinquish them in the former, and confine ourselves to the humbler and more useful province of investigating particular phenomena.

ART. XXI. *Elements of the Philosophy of the Mind, and of Moral Philosophy.* By Thomas Belsham. One large volume 8vo. Johnson. London.

IN the preface to this work, it is said to contain 'the substance of a course of lectures, which the author delivered to his pupils, upon some of the most interesting subjects which can occupy the attention of the human mind.' It is, however, from the preface only, that we receive this information; for the most interesting subjects which can occupy the human mind, are afterwards treated with the same drowsy mediocrity and tameness of sentiment, as if they had related to a fly or a fungus, or to any thing but the great interests of man. A *compendium*, like that of Mr. Belsham, is not addressed to the profound metaphysician, who, possessing already the zeal which rewards itself, needs no other incitement to the investigation of truth, than the knowledge that truth is to be discovered; but to the diffident, though aspiring student, whose eagerness is checked by every unexpected obstacle, and who requires to be often warmed by new prospects, before he can feel that ardour of persevering pursuit, which afterwards finds a species of pleasure in the very restraints and difficulties of the course. We know that, in many sciences, it is impossible to furnish such incitements; and we own, that, in that which Mr. Belsham professes to illustrate, they have usually been furnished so very sparingly, that the term by which it is denoted is to many a name of terror or disgust. But, in that great and comprehensive philosophy, which leads us to the source of all our *knowledge*, of all the *relations* which bind us to our fellow men, or to a superior Being, and of all the *emotions* which arise, in those various relationships, from the circumstances of every hour, there is surely no want of subjects, to add interest and animation to the truths it unfolds. Were it necessary to give an instance of the *effect*, which, when thus happily delivered, the philosophy of the Mind is capable of producing, we could name a work, which scarcely differs, in title, from the volume before us. But it is in the title only that any resemblance is to be found; for, in the composition of the volume itself, Mr. Belsham has studiously imitated the syllogistic minuteness of an old logical treatise, and, by dealing out his brief paragraphs, without one episodic reflection, and talking of crimes and virtues, as if they were properties of a triangle, has sacrificed all the interest of which, independently of its truth, a metaphysical work is susceptible. In an elementary work on the physics of external matter, the tedious minuteness of the composition is in a great measure compensated by the no-

velty of the experiments. But, in the *mind*, there are few *experiments* which can have the charm of novelty even to the most unacquainted student; and hence whatever sparingness of ornament may be allowed, and even be requisite, in *dissertations* that are addressed to the practised inquirer, the ardour of interest, excited by any '*elements* of the philosophy of mind,' must depend chiefly on the skill of the writer, in connecting the known phenomena with the objects of our habitual emotion, and thus rendering even our gentlest feelings of taste or of social regard auxiliary to the progress of the severest science.

The work of Mr. Belsham may be considered as an apology for three great doctrines, Materialism, Necessity, and the selfish system of morals.

'The author flatters himself that he has stated the evidence for the doctrines of Necessity, and Materialism, in a form so obvious and succinct, and that he has suggested such answers to the popular objections, as, if they fail to convince, will at least abate the clamour of ignorance and prejudice against these principles, as if they were unfavourable to virtue, and subversive of religion.' P. 4.

As we cannot therefore examine minutely the separate doctrines of a general compilation, our attention shall be chiefly directed to that which the author professes to have been a principal object of his work, and which would have given it the merit of originality, had the object been obtained.

We own that it was to us no unfavourable omen of the acuteness of the compiler, to find that in adopting the system of materialism, he had involved it in all the unnecessary complication of the Hartleyan theory. The existence of vibrations and vibratiuncles is so completely hypothetical, and even in apparent opposition to so many circumstances of the nervous system, and would prove so little, were it admitted, that we did not expect it to be adopted by an author, who, from the nature of his work, must have studied, at least with some degree of attention, the chief systems of sceptical as well as of dogmatical philosophy. To the truth of the doctrine itself, however, though our opposite faith be completely unshaken, it is not our intention to object: it is its moral tendency only that we wish to consider.

For this, indeed, Mr. Belsham has one short argument, that whatever is true cannot be hurtful. It is the motto of his title-page,* and is afterwards repeated, with equal emphasis, at every time of need. 'If the doctrine be true,' he contends, 'the diffusion of it can do no harm. It is an established and undeniable principle, that truth must be favourable to virtue:' p. 312. To us however, this principle, instead of being undeniable, has always

* Αληθειαν ζητω, υφ' ης ουδεις πωποτε εβλαβη. Marcus Antoninus.

appeared the most questionable of postulates. In the declamation of Plato, or the poetry of Akenside, we admit it with little scruple, because we do not read Plato or Akenside for the truths they may chance to contain; but we always feel more than scepticism, when we are assailed by it in a treatise of pure philosophy: nor can we account for the almost universal assent it has received, from any other circumstance, than the profession and habits of the first teachers of morals in our schools, and of the greater number of their successors. It was a maxim of religion, before it became a maxim of philosophy; though, even as a religious maxim, it formed a very inconsistent part of the optimism in which it was combined. The Deity wills happiness; he loves truth: truth therefore must be productive of good. Such is the reasoning of the optimist. But he forgets, that, in his system, error too must have been *beneficial*, because error *has been*; and that the employment of falsehood, for the production of good, cannot be more unworthy of the Divine Being, than the acknowledged employment of rapine and murder for the same purpose. There is, therefore, nothing in the abstract consideration of truth and Deity, which justifies the adoption of such a maxim; and as little is it justified by our practical experience. In the small events of that familiar and hourly intercourse, which forms almost the whole of human life, how much is happiness increased by the general adoption of a system of concerted and limited deceit! for it is either in that actual falsehood, which must, as falsehood, be productive of evil, or in the suppression of that truth, which, as truth, must have been productive of good, that the chief happiness of civilized *manners* consists; and he from whose doctrine it flows, that we are to be in no case hypocrites, would, in mere manners, reduce us to a degree of barbarism, beyond that of the rudest savage. In the greater events of life, how often might the advantage of erroneous belief be felt! If, for example, it were a superstition of every mind, that the murderer, immediately on the perpetration of his guilt, must himself expire by sympathy, a new motive would be added to the side of virtue; and the only circumstance to be regretted would be, not that the falsehood would produce effect, since that effect could be only serviceable, but that perhaps the good effect would not be of long duration, as it would be destroyed for ever by the rashness of the first daring experimenter. The visitation of the murderer by the nightly ghost, which exists in the superstition of so many countries, and which forms a great part of that complex and unanalyzed horror, with which the crime continues to be considered, after the belief of the superstition itself

has ceased, has probably been of more service to mankind than the truths of all the sermons that have been preached on the corresponding prohibition in the Decalogue. It is unfortunate, that, with this beneficial awe, unnecessary horrors have been connected; for the *place* continues to be haunted, as well as the *person*; and the dread of our infancy is thus directed, rather to the supernatural appearance, than to the crime. But if superstition could exist, and be modified, at the will of an enlightened legislator, so as to be deprived of its terrors to the innocent, and turned wholly against the guilty, we know no principle of our nature on which it would be so much for the interest of mankind to operate. It would be a species of prohibitive religion, more impressive, at the moment of beginning crime, than religion itself; because its penalties would be more conceivable and immediate. Innumerable cases may be imagined, in which other errors of belief would be of moral advantage; and we may therefore assume, as *established and undeniable*, that there is nothing in the nature of truth which makes it *necessarily* good; that, in the greater number of instances, truth is beneficial; but that, of the whole number of truths and falsehoods, a certain number are productive of good, and others of evil. To which number any particular truth or falsehood belongs, must be shewn, in the usual way, by reasonings of direct experience or analogy; and hence, *in a question of utility*, the demonstration of mere logical truth cannot justly be adduced as superseding the necessity of other inquiries. Even though the contrary of that postulate, which Mr. Belsham has assumed, could not have been shewn from *other* cases, it would not *therefore* have been applicable, without proof, to the great questions which he discusses; for these questions comprehend all the truths that are of most importance in human life, which are thus the very truths from which the justness of the assumed principle is most fully to be demonstrated or denied.

In conformity, then, with the preceding reasoning, the doctrines of *materialism*, *necessity*, and *the selfish obligation to virtue*, may be true, and the general belief of these doctrines be yet of important detriment to the interests of our race.

The effect of the belief of *materialism* is undoubtedly, as far as it operates, to weaken our confidence in a state of future being. When the whole material frame is evidently disorganized, the thinking being is to the perception of the materialist annihilated; and, by the frequent view of this temporary annihilation, the idea of *annihilation* is so closely connected with that of mind, that the belief of the immortality of the soul requires, in the materialist, as great an effort of faith, as would be necessary in the immaterialist, to the belief of its possible annihilation. We are told, indeed, that to say, 'that immateriality necessarily implies

indescerptibility, incorruptibility, and natural immortality, is an assertion perfectly gratuitous.' p. 346. The justness of this remark we will not stop to examine. Let the opinion be, as Mr. Belsham terms it, a *fancy*. It is enough for us, that it is the fancy of every one who believes the absolute simplicity of the percipient being, and cannot therefore apply to it in his conception those changes of decay, which necessarily imply composition of parts. He may have no foundation for his belief of its incorruptibility; but that belief is necessarily connected with his immaterialism: and hence, as he has no difficulty, in this respect, to be overcome, the *religion of immortality* is more readily received by him, and the idea of continued existence, with all its responsibilities, is more constantly present to his mind. In no circumstance does materialism aid this belief: we must therefore hold it, as far as it operates, to be a weakener of our confidence in a future state, and to be thus, as far as the motive of a future state has influence, prejudicial to the cause of virtue.

But there is another view of this doctrine, in which its influence, though more secret and refined, is perhaps of equal effect. It is not by precepts, delivered with the force of authority or of reason, that moral character is chiefly formed. It is by a multitude of emotions, slight in their separate effect, but powerful when combined, which give a general elevation or sordidness of sentiment, while they seem to act more upon our taste than on our morals. A taste for the fine arts, and a taste for virtue, have thus been considered by some philosophers as modes of the same internal sense; and though the *direct connexion* is too strongly urged, we must allow, at least, the force of the *analogy*. The habits of polished life, and the elegance of a cultivated understanding, where they are not counteracted by other circumstances, are, in like manner, favourable to benevolence; not by informing us of new duties, but by acting through our taste, and softening rather than instructing us. It is thus, when moral sentiments have been delivered in all the sublimity of poetry, we feel their influence remain, for a time, beyond the conviction of mere logical reason; as if the dignity and majesty of the verse had transfused themselves, with their whole power, into the truth and persuasion of the maxims it delivered. Whatever, therefore, gives ideas of general elevation, though it may not directly suggest any moral motives, is favourable to virtue; whatever gives sentiments more abject, though its practical influence may not be immediate, is favourable to vice: and Mr. Belsham will surely allow, that there is more sublimity in the conception of mind, as raised by its own principle of immortality above the changes of material being, than in the belief, that the most heroic virtue we admire is but a certain aggregation of particles, which one

other particle, by the new affinities it introduces, may wholly disarrange, and which must rot in the grave, with the other parts of the withered or ulcerated body. The contemplation of a putrefying soul does not make the living man, who is to be the object of our sympathies of regard and veneration, a more interesting spectacle. We may still feel compassion for his miseries, as we feel it for those of the lowest animal that suffers; we may even be capable of much of the esteem, and of many of the sacrifices of friendship: but it will have less of that generous devotion, the spirit of which requires to be nourished by higher thoughts. Mr. Belsham will perhaps say, that the difference we have imagined belongs to poetry, rather than to philosophy. He will tell us *with truth*, that the actual misery relieved, and happiness conferred, are precisely the same on either hypothesis. But poetry has the same effect as philosophy, when it is the poetry of every heart: and in the whole scale of life, when other circumstances are the same, we know that our sympathies are raised or depressed, according to the *sentiments* which have been associated with the object: to these, in their relation to man, materialism adds no sublimity; and its influence, therefore, as far as it acts through our feelings, is detrimental to virtue.

The unfavourable influence of the doctrine of *necessity* is still more evident. Mr. Belsham indeed affirms, that it has *beneficial consequences*; that it leads us to be cautious of trusting ourselves to situations of temptation, as if the Necessarian, to whom every past repentance is an increase of power, and who relies on his calculations of greater good, would not be more confident of escaping, than he who believes that an accidental temptation, in opposition even to his long established views of the greater advantage of virtue, may seduce his will to too easy obedience. He affirms, that it leads us to lay a greater stress on the formation of moral habits;—as if it did not lead us rather to acquiesce in that degree of virtue which has, in one instance, prevailed, from the full conviction that it must ever after prevail. He tells us, that 'it supplies the most powerful motives to virtue, by exhibiting the inseparable connexion between natural and moral good and evil;'—as if a headach did not follow the nocturnal debauch of the drunkard, as readily on one hypothesis, as on the other. It is beneficial also, he contends, as 'being inseparably connected with optimism, and teaching us to see God in every thing, and every thing in God;'—as if optimism were not itself most fatal to morality. There needs no cautious dread of future action, where the event, whatever it be, must be the best of possible events: and hence, instead of producing that 'self-annihilation or complete and habitual conformity of the will of man to the will of God, which is stated as another consequence of the be-

lief of this doctrine, it must produce a complete carelessness as to the expressed will of God, by convincing us, that it is impossible to disobey, by any caprice or apparent rebellion, that secret but supreme will, which contradicts its own precepts; conformity to the expression of which would be therefore, if we may be allowed to suppose an impossibility, the greater disobedience. The guilt which we abhor as destructive of happiness, is, in this system, as productive of it, as the most heroic virtue; and a Borgia and a Catiline are instruments as beneficial as a Titus or a Trajan. To see God in all, is to see him in the workings of every bad passion, in the private assassination, and the public conspiracy: and our devotion and gratitude owe much to him, who, even though he should violate a few forms of reasoning, is successful in placing to our view the will of man, between the crime which we detest, and the Creator whom we adore.

But the doctrine is not merely without beneficial consequences. In equalizing the virtues and vices of all men, as parts of one immense machine, it leaves no virtuous emotion unimpaired. The bread which nourishes the mendicant becomes as much an object of his gratitude, as the benefactor who bestowed it; and the oppressor of an empire is to be looked on, with no other loathings, than the sword or the bowstring, which has ministered to his will. This very indifference is by Mr. Belsham considered as an advantage, because 'it conciliates good-will' even to the most detestable of our race.

'By teaching us to look up to God as the prime agent, and the proper cause of every thing that happens, and to regard men as nothing more than instruments which he employs for accomplishing his good pleasure, it tends to suppress all resentment, malice, and revenge.' p. 316.

If, indeed, it tended to suppress that resentment only, which, in injuries to ourselves, exceeds too often the slightness of the offence, its influence would be beneficial. But to suppress all resentment, is, in education at least, to suppress virtue itself. There is a virtuous *wrath*; we could almost say, a virtuous *malice* and *revenge*; which, we trust, will ever be excited by the tale of successful oppression: for though they may spring indeed without philosophy, they grow and blossom into all the virtuous resolutions of maturer character. If we must not feel resentment to man, because 'God is the prime agent,' there is as little *reason*, in gratitude, or esteem. When every emotion, then, of the infant mind has been checked by a syllogism as it arose; when it has been taught, with complete precision of proof, that every one is irresistibly impelled to what he does, and that merit and demerit are either words without meaning, or applica-

cable to human beings, only as they are applicable to the rod and the sweetmeat; from a child thus educated without love or indignation, what early resolutions of excellence, and what virtues of maturity may we reasonably hope! It is not enough to appeal to the conduct of Necessarians in general, since, fortunately for the world, the doctrine has not yet established itself in our nurseries, or in the hearts of our mothers; and there is therefore no one, who, in the most important period of his life, has not been taught, rather than forbidden, to revere and to despise. It is still more fortunate, that, by the associations of pleasures and sympathies, which are formed without will or precept, a provision is made by nature against the chilling influence of future systems of philosophy; and that, hence, though these systems may diminish our virtuous emotion, they cannot wholly destroy it. The influence, however, though limited, is in every respect unfavourable to morality. We own, indeed, that the *actual existence* of necessity is of much importance, as being the only source of the power of motives, and, consequently, of all moral education. But truth, and the belief of truth, are different; and it is of much more importance, that men should not be vicious, than that they should, in every instance, reason with exact consistency.

In saying of the system of ethics which Mr. Belsham recommends, that it is, in the highest degree, 'unfavourable to virtue,' we do not think, that we are joining 'in the clamour of ignorance and prejudice.' To *virtue*, indeed, in the sense in which he uses the term, it is not unfavourable; because, in that sense, as far as motives are concerned, it is impossible for any one not to be *perfectly* virtuous. But of the more generous morality, to which we have been accustomed to look with reverence, his system is destructive. The relations of *virtue* to others are, according to him, *accidental*. It is *valuable*, and indeed *exists*, only in relation to the agent: for the happiness of others is not necessarily our own; and 'the only valuable end of existence is happiness.' Virtue, then, he defines, 'the tendency of an action, or affection, habit or character, to the ultimate happiness of the *agent*.' There is an ambiguity in the word *ultimate*, which Mr. Belsham might easily have avoided, as, in conformity with his reasoning, it can have no reference to *time*, but to *degree*, and should therefore be exchanged for *greatest*. He, then, is *virtuous*, who seeks his own greatest happiness; and as this is, at no moment of existence, precisely the same in all individuals, and no one is entitled to substitute his own judgment to that of the agent, every one must be allowed, by the Necessarian at least, to be perfectly virtuous, because every one, at the moment of volition, constantly prefers that which

appears to him the greatest good. The possibility of vice is thus a contradiction; because it supposes the agent to have desired that which appeared to him less desirable. He may indeed be mistaken in his choice; but, in his unremitting search of the greatest good, he is always moved by that preponderance of motives which is relative to him alone; and, even if the choice were possible, Mr. Belsham would surely call him mad, rather than virtuous, if he willed that which really tended to his greatest happiness, when, in his own opinion, it tended to his misery. Such a choice would, according to the definition, be actual vice; and it is only in such imagined impossibilities, that vice can be found. If then, he alone be vicious, who prefers a *less* good, the distinction which Mr. Belsham has attempted to make is nugatory, and guilt is a just object of moral approbation.

In this strict sense, the selfish system *must* be unfavourable to virtue; because it is, in truth, a general license to vice. But we will forget the inconsistency, and allow that, where the perceived happiness of the agent is the sole standard of morals, there may yet be a distinction of actions, as morally *right* or *wrong*.—How much, however, must our better emotions be deadened, by that reference to self, which *ought* continually to be made! for, if selfish happiness be the essence of virtue, it is the *duty* of every individual to have that happiness constantly in view; and he is least virtuous, as to *motive*, who forgets it most. It is by such a reference, made with cautious deductions, in every situation of public feeling, that generosity, patriotism, and all the devotions of benevolence, are to be fostered into habits? We blame the system of those calculators of the general good, who prohibit the indulgence of any sentiment of affection, till we have compared it, as to its result, with every other feeling. But even these, though they deprive us of many pleasures, still leave us something, beyond ourselves, to which our hearts may turn. If we blame, then, as diminishing our moral sympathy, those estimates, in which our own happiness is sacrificed to that of others, with an extravagance of generosity, what shall we say of the moral influence of a system, in which self is the sole standard; which calculates with equal caution, but which in its calculation, lays out of account, as things of no essential moment, the happiness and the misery of every other being; and allows us to relieve the most pressing want of him who has wasted his fortune or his health in our service, only when we have found, that, by the casual connection of things, his misery cannot continue a moment longer, without some evil to ourselves. The world *selfish* has, we know, two very different meanings, in the philosophic and the vulgar acceptation. But we fear, that the state of mind which

in the one case it denotes, will, in many instances, very speedily follow, when the other has become the standard of our moral regard.

In our examination of the moral tendency of these doctrines, as asserted by Mr. Belsham, it is not our wish to turn against him his own *undeniable principle;* and to say, that, because their influence is pernicious, they are necessarily false. But we still say, that, on the *supposition* of their truth, their tendency is not *therefore* beneficial. We love truth much, but we love virtue more; and there is no degree of knowledge, which would not, in our opinion, be too dearly purchased, if, to obtain it, we were to sacrifice all the purest pleasures, and best affections, of the uncorrupted heart.

The Scotch philosophy, as it is termed by Mr. Belsham, is treated with very little favour. He disdains to make use of its support, and is content, in preference, to step boldly into any difficulty. Thus, after stating the doubt as to the existence of external things, he says, 'The Scotch philosophy again refers us to instinctive conviction, a doctrine already sufficiently exploded.' What then is the more convincing argument, which he opposes to Berkeley? He allows, the hypothesis to be *possible*.

'But, if it be admitted,' he continues, 'we have no evidence of the existence of any beings in the universe, but the Deity and ourselves. All that we see, or perceive by the senses, and every person with whom we converse, are mere *entia rationis*, having no real existence: and, for the loss of these, it is a poor compensation, that we may infer from the benevolence of God, that there are in the universe other solitary individuals like ourselves, subject to the same illusive impressions.

'The existence of an external world is not often made the subject of inquiry, and cannot therefore be called the proper object of belief or disbelief. To those who speculate upon the subject, the supposition of the real existence of external objects commonly appears more pleasing in itself, and therefore more agreeable to divine benevolence, than to suppose that we are subjected to a perpetual illusion; and no case has ever occurred which can lay a foundation for doubting the truth of this conclusion. Pp. 131. 132.

The chief part of this objection to Berkeley is the mere statement of consequences, which Berkeley himself had drawn, and which are, in truth, essential to the theory; and of the rest, we scarcely can persuade ourselves, that Mr Belsham seriously proposes it, as the ground of our belief in an external world. Did man believe in that world, only after he had found out, that a society of *substances* would be more pleasing, than the existence of mere *entia rationis*, and therefore more suitable to the benevolence of Deity? Did the idea of an all perfect Creator precede our first idea of an external creation? Is a metaphysical truth to be compared from tables of profit and loss? Does the poor man

believe himself rich and healthy, because poverty and sickness are evils; and do the compassionate deny the existence of murder and misery, because the production of virtue and happiness appears to them more agreeable to divine goodness? We are convinced, that Mr. Belsham himself believed in an external world, as strongly, before he felt the force of the ratiocination he has given us, as he did afterwards; and we fear, that, when he questions again his own belief, he must trace it to that very instinctive conviction, which it is his boast that he has himself exploded. To say of an opinion, that, because it has not often been made a subject of inquiry, it is not a proper object of disbelief, is either without meaning, or expresses still more strongly that *faith* for which the Scotch philosophers contend. To them universal assent is necessary; but to Mr. Belsham it is sufficient that inquiry *has not often been made*. His argument, from the circumstance that no case has ever occurred in opposition to our conclusion, is a truly happy instance of a *question assumed*. The *real succession of our ideas* is not affected by the controversies of philosophers. Unless therefore, we have previously believed in an external world, no *case can* occur to disprove it; and, if we have previously believed in it, the same *cases* which seem to the idealist to justify his faith, *must* seem to us to justify our own.

In the general execution of the work, there are many traces of that hastiness of compilation, by which expressions and opinions vary in force, according to the author last read. Of this a striking example occurs, in the System of Ethics before examined; in which, though virtue be the willing of our own good, and self-interest its sole obligation, it is afterwards conceded to the advocates of benevolence, 'that self-annihilation is essential to perfect virtue,' and that even 'that most refined self-interest, by which we practise virtue and piety with a view to ultimate reward, is inconsistent with the perfection of virtue:' so that we cease to have any virtue the moment we feel its *obligation:* and are then most virtuous, when the very essence of virtue is wholly disregarded or despised. For this want of correctness and of interest, we may, as critics, blame the work; but we confess that we do not regret it. We know what fascination it is in the power of eloquence to give to errors the most dangerous; and it is therefore better, when such evils are to be shed abroad, that they should not come from the hand of a master.

ART. XXII. *Reflexions sur le Divorce.* Par Madame Necker. Nouv. Edit. Paris. Chez Pougens. An X. 1802.

AMONG many instances of rash and inconsiderate legislation which the French Revolution has furnished, the law which occasioned the work before us is not the least striking. Legislators, intrusted by their fellow-citizens with the care of the private rights, the domestic happiness, and the morality of the nation, ought to shew some sense of the importance of the duty they are to discharge; and, if they have not wisdom enough to adopt proper measures, they ought at least to show a degree of caution corresponding to the value of the object at stake. As Madame Necker could not be supposed very lenient in criticising the errors of the French Legislature, our expectations were raised by the ample opportunity which was here afforded; and both the nature of the subject, and the high reputation for talents which has always accompanied her name, made us regard this work with no small degree of interest. We must, however, confess, that our expectations, as to the general style and execution of the work, have been by no means fulfilled. In almost every page, we were oppressed with a load of similies and comparisons, and of Greek and Roman names, of all sorts and descriptions. The whole treatise is composed like a school-boy's theme, where the plainest thing that he states must be illustrated by a simile; and he must also at every step undergo the labour of turning up his classical dictionary, to find out some virtuous Greek or Roman, who did something or other, which had either some or no resemblance to what he is writing about. These 'Reflections' are so extremely fruitful in illustrations of this sort, that, if the subject was not a very plain one, the very illustrations would make it obscure. Where it is necessary to talk of filial respect to aged parents, and the delight which it affords to its objects, this sufficiently plain idea is illustrated by the crops of violets* which grow on the Alps, at the side of mountains of ice, and perfume them with their ambrosia. Now, every person will be ready to acknowledge, that filial respect and duty must be the greatest consolation of old age, but it is not so easily discovered, that glaciers derive any advantage from violets growing in their neighbourhood. A few such similies, though not in the best taste, might be tolerated. But a constant succession of illustrations, of one sort or other is infinitely more tiresome than the most plain and homely language. Madame Necker, however, is still more productive in examples than in similies. She, somehow or other, acquired an immense stock of Greek and Roman names, and thought

* Page 43.

proper to muster them all up on the occasion. There is hardly a common place story we have heard since we went to school, that is not mentioned or alluded to. The conduct of Helen is considered as an instance particularly in point. Astyanax and Andromache, Clytemnestra, Orestes, Jason, Medea, Meleager, Polyxena, Ruth and Naomi, Æneas and Cæsar, Moses and Hymen, with the more humble names of Baucis and Philemon, form a part of the numerous assemblage to which the reader is introduced. The learned authoress must have determined to terrify her countrywomen into modesty and good behaviour, by her superior knowledge and erudition. With what superior respect and reverence must we look to a book, which, every second line, talks of the lyre of Orpheus, the fate of Pygmalion, the picture of Timanthes, and the death of Arria and Pætus! We should not object much to all this display of second rate erudition, were we not convinced that it is a mode of writing, of all others, the least adapted to the subject treated of. Such a work can never be popular; because a great proportion of those to whom it is addressed, can neither understand it, nor derive any amusement from the perusal; and persons of better information require something more than a mere enumeration of Greek and Latin names on a subject of this kind. Though a great many of the ancients, who are introduced on this occasion, merely make their appearance for ornament or parade, some of them, however, have a more important part to perform. The wicked moderns are desired to take example from the pure conjugal fidelity of the ancients. Madame Necker says, that, in Greece, divorce was neither permitted by the laws, nor by the customs of that country. But the manner in which she arrives at this conclusion is rather curious. She observes that the Greek poets have painted the fatal consequences of domestic quarrels in the most lively colours—

'And if divorce has not been directly mentioned in their moral fables, it is, without doubt, because it was not permitted, either by the laws or customs. For the faults of women are so severely punished in them, and the bonds of marriage appear so sacred, that we must *conclude that they were indissoluble*;' and that this people had decided, along with Jesus Christ, that divorce and adultery were synonimous. The Greeks had placed the purity of female manners under the security of a vague and undefinable terror, produced by the awful connexion of crime and punishment. Helen is unfaithful, and Troy is in ashes. Clytemnestra betrays her husband, and soon afterwards she assassinates him. Orestes kills his mother, to avenge the death of his father; and he is delivered up to the Furies. Let us here observe, *that an infallible way of ascertaining perfectly the opinions and manners of a nation, is to judge by the association of ideas.* By displaying the unhappy catastrophe, the Greeks increase the horror which they wish to inspire

towards perjured women. Guilt appears more heinous, from the dread with which it is regarded; and remorse is, in their tragedies, the excess of desolation.' P. 59.

Madame Necker's infallible mode of judging has not been very successful on this occasion. She concludes, because some of the events, related in the Greek poets and tragedians, turn upon adultery or incest, without any divorces being mentioned, that no divorces were permitted. It happens, however, unfortunately for her argument, that, in most parts of Greece, divorce appears to have been permitted by the laws. In Crete, any person might dismiss his wife, who was afraid of having too many children.* At Athens, divorce was sanctioned by the chief magistrate, under the authority of the laws, upon very trifling grounds. And in Sparta, the Lacedemonians appear to have considered adultery as rather laudable. Madame Necker must at least have read through a French translation of Plutarch; and, if she did, she must have seen the life of Pericles, that a divorce took place between him and his wife, who was his near relation, by mutual consent, upon which he married Aspasia. And as for the purity of Grecian morals, the great moral philosopher Socrates is said to have accommodated his pupil Alcibiades with the use of his wife Xantippe; and, notwithstanding the very refractory temper which that lady is said to have possessed, she is believed to have been obedient to her husband, at least in that instance.

Although our authoress appears to have been rather better acquainted with Roman history and manners, she is not very fortunate in her remarks. She observes—

'Can we believe that Cornelia or Veturia would have formed new engagements—I do not say during the life of their first husbands (for that supposition alone would outrage their memory)—but, even after their death, would they have driven from their *penates* the noble and cherished shades which they continually held out as examples to their children? Would Coriolanus have yielded to the tears of Veturia, if he had not been brought up by her in the sanctuary of conjugal love, in the presence of the manes of his father? And could Rome have filled the universe with the noise of her exploits, without the influence of filial respect? Such are the important consequences of the sanctity of marriage. What dangerous consequences must arise to the children, from the separation of the authors of their existence! What destructive discord must not the strange combinations attending divorce produce upon their opening understandings!' P. 48.

We are not to suppose, that the idea of divorce was altogether unknown in the time of Veturia, as Dionysius of Halicarnassus

* Archbishop Potter's Antiquities, vol. ii. p. 296.

has preserved a speech made by herself, in which she mentions, that her son Coriolanus, before he left Rome, told his wife Volumnia that he was no longer to be her husband, and wished her better luck in marrying another more fortunate than himself.* Veturia is far from annexing any blame to her son on this account: so there is no reason for supposing, that she regarded divorce with any great degree of horror; and Coriolanus, according to the same historian, expresses particular gratitude to his wife for not leaving his mother, which she must have done, if she had followed his advice. This is altogether inconsistent with the idea of divorce having been unusual at that period. Rome is not the best instance for proving that filial respect or duty is inconsistent with the separation of the parents. Plutarch tells us, in his comparison of Numa and Lycurgus,† that according to the institutions of the former, after a Roman husband had a sufficient number of children, he might either make over his wife to any person who wished to have a family, or lend her out for a certain time. On the other hand, the Lacedemonian retained his wife in the house; but, during the subsistence of the marriage, he allowed any person he chose to participate in her favours. Plutarch adds, that these delicate Spartan husbands even gave invitations to handsome men, whom they thought most likely to improve the breed. Honest Plutarch, however, appears at a loss which of the two legislators he shall admire most; and observes, that the only difference between them is, that the one introduced a total indifference on those subjects which usually excited jealousy and heartburnings, while the Roman institution shewed a sense of shame, by imposing the veil of a new agreement, and confessed the difficulty of arranging such a communion. This practice appears to have been generally adopted by the old Romans. Strabo mentions, that the younger Cato accommodated his friend Hortensius with his wife Marcia,‡ in imitation of the customs of the old Romans. A full account of the transaction is given by Plutarch, in his life of Cato.‖ Hortensius, in order to cement the intimacy and friendship which already subsisted between him and Cato, applied, in the first place, to have the use of his daughter Porcia, who was already married to Bibulus. Cato, considering this as her husband's affair, declined any interference. Hortensius was not however discouraged, but made the same proposal for Cato's own wife Marcia, who happened at that time to be

* Dion. Halic. L. 18. c. 41. Vol. ii. p. 1602. Edit. Reiske.
† Vol. i. p. 305.
‡ Strabo, Vol. i. p. 505. Amst. 1707.
‖ Vol. iv. p. 408.

actually pregnant... Cato had no objection to this; and Hortensius obtained possession of the person of Marcia, by a regular and formal transaction made with the consent of her father Philippus. It also appears, that among other legal modes of acquiring wives, prescription or use was recognised by the customs of Rome. But as, in this way, a matron, who only meant to be a wife for a certain time, might be acquired by her temporary husband, it was provided by the laws of the Twelve Tables, that unless there was an interruption of three nights, a year's matrimonial connexion would constitute prescription.* From another fragment of the Twelve Tables, it is proved, that even so early as the time of the Decimvirs, unlimited freedom of divorce was permitted. It was only necessary for either of the parties to send a messenger to the other, desiring them to manage their own concerns; and this constituted a divorce.† Facts, such as these, give a much more intelligible idea of the so much vaunted purity of manners among the ancient Romans. They may not have been so dissolute or corrupt as their posterity during the time of Augustus: but although, in these rude ages, they do not appear to have been much influenced by personal charms, neither delicacy nor morality was much regarded in their matrimonial arrangements. Madame Necker, however, after mentioning the bad effects that divorce would produce in France, above any other country, observes—

'These observations on Protestant countries would equally suit the different epochs of the Roman Republic. It is, however, useless to apply them: for it *was not divorce* that was permitted at Rome, but only repudiation. In ages approaching to the state of nature, the rights of the sexes were not equal. The empire, of course, was established; and a law establishing reciprocal divorce would have been considered as madness.' p. 86.

A few lines afterwards, Madame Necker observes, that

—divorce, among the Romans, was a punishment, and not a matter of agreement. They avenged themselves upon their guilty wives, in two ways equally dreaded—by real death, or by repudiation; which was a kind of death, both in its civil effects, and in public opinion. Thus, women were subjected, at the same time, both to the punish-

* Ut quæ mulier, cum juris esset, annum unum apud verum matrimonii causa fuisset, ea mulier ni trinoctium usurpatum esset pro usucapta haberetur: xxi. Rosin. Antiq. Rom. p. 596. *de leg. Duod. Tab.*—Rosinus states, on the authority of Aulus Gellius, that the word 'matron,' which has so respectable a sound to modern ears, was originally applied to wives of that description.

† Ut si è conjugibus alter alteri nuncium mitteret, eumque res suas habere juberet, divortium esset.

ment of death, in which view they were considered as slaves, and to the suffering of shame, or rather disgrace, which could only be felt by those who were free; and this combination is perhaps peculiar in social order. The Roman ladies, who were subjected to so severe laws, gave new subjects of complaint to their husbands; and there is no reason for being surprised, that centuries should elapse without producing one instance of repudiation. But what connection can be found between divorce, as established among the Romans, and that which is now adopted? The one was at once a law of slavery and modesty; the other a law of liberty and audacity. At Rome, divorce was the guardian of decency; in France, it will be the corrupter of decency: and if repudiation had been introduced among us, as it was among the Romans, women would always be the victims. The only object of affection would be charms, which so soon pass away; and, amidst the depravity of our manners, the first trait of old age would have been the signal for separation. The duration of marriages would have been limited to the spring-time of life; and the faded rose would be cruelly separated from its prop, and delivered up to all the storms of life. Notwithstanding, however, the partiality of the law, which only gave men the freedom of divorce, this form will be less injurious to the purity of manners, which, in unison with nature, afford women an opportunity of exercising one additional virtue.'

The knowledge which Madame Necker here displays of Roman customs, is not very profound. She does not appear even to have understood what they meant by *repudiation*,* and, if she did, it is perfectly clear, from the law of the Twelve Tables, already referred to, that both sexes had the power of dissolving the marriage, even at that period of the Roman commonwealth. The eulogiums, therefore, which some very respectable historians have passed upon the purity and sanctity of the ancient Roman marriages, must be received, subject to many limitations. A great mistake, into which they appear to have fallen, has already been pointed out by Montesquiu;† and it cannot be supposed, that divorces by mutual consent were unknown, when in their very limited code of laws, there was one which allowed it to either party. There is, however, no reason to suppose that

* *Repudium*, in its appropriate meaning, applied to the case of *sponsalia*; *divortium*, to marriage. The words of form were different from that circumstance. *Vide* Heinec. Antiq. Rom. vol. i. p. 311. Rosin. Antiq. p. 458.

† Esprit des Loix, L. 16. c. 16. That profound and acute writer explains the reason why Carvilius Ruga, divorcing his wife at the desire of the Censors, on account of sterility, although he loved her himself, might make him odious to his countrymen, who dreaded such interference; but it cannot be believed that that was the first instance of divorce among the Romans.

husbands would be very apt to dismiss wives who were entirely subject to their authority, at a time when their personal labour was of some value. The husband, after consulting with his friends might put his wife to death, if he chose, for an act of drunkenness; and if he was tired of her, he might oblige any of his friends, by making her over to him. Where a husband had all this power, it could hardly be his interest to dissolve the marriage. If he did so, it might, perhaps, even among the virtuous Romans, be regarded as an act of folly, if not cruelty. We must therefore regret very much, that Madame Necker has so much weakened her argument, by constant reference to manners and laws with which she was altogether unacquainted, and which certainly cannot be held out as models for reforming the corruption of modern marriages. No species of adultery can appear more offensive, than the transaction of the virtuous Cato with his friend Hortensius; and we are most decidedly of opinion, that if Madame Necker had employed the talents she appears to possess, in delivering her sentiments without all that parade of learning, her work would have been much better calculated to promote the cause, which she seems to have espoused, from the most amiable and virtuous motives.

After the observations we have already made, it is hardly necessary to give a minute analysis of the arguments used by Madame Necker. She considers the question in four points of view: 1. The individual happiness of married persons in their youth: 2. The bad effects of divorce with regard to children: 3. The effect of divorce upon manners: and *lastly*, the comfort and consolation which old age derives from the married state. All those objects of marriage are defeated, according to our author, by the law permitting divorces. She views the reproduction of the species as a very secondary object in marriage: and that the primary object is the union of affections, sentiments, and interest, which ought to take place; and which marriage, according to Scripture, was instituted to promote. It is rather singular, that Milton, arguing in favour of the liberty of divorce, rests his argument on precisely the same foundation as Madame Necker opposing it.—'For although God, in 'the first ordaining of marriage, taught us to what end he did it 'in the words expressly implying the apt and cheerful conversa-'tion of man with woman, to comfort and refresh him of the evil 'and solitary life, not mentioning the purpose of generation till 'afterwards, as being but a secondary end in dignity, though not 'in necessity; yet, now, if any two be but once handed in the 'church, and have tasted in any sort the nuptial bed, let them 'find themselves never so mistaken in their dispositions through 'any error, concealment, or misadventure that through their dif-

'ferent tempers, thoughts, and constitutions, they can neither be 'to one another a remedy against loneliness, nor live in any union 'or contentment all their dayes, yet they shall, so they be but found 'suitably weapon'd to the least possibility of sensual enjoyment, 'be made, spight of *antipathy*, to fadge together, and combine as 'they may to their unspeakable wearisomeness, and despair of all 'sociable delight in the ordinance which God establisht to that 'very end.'* Milton's great object is to shew, that, according both to the Mosaic code and the Christian dispensation, divorce was permitted for other causes besides adultery, particularly 'in-'disposition, unfitness, and contrariety of mind.' The motive which urged him to compose these treatises is well known. With all their paradoxes, they abound in eloquent passages; but neither these, nor the great name of their author, have preserved them from almost total oblivion. Even at the time they were published, they do not appear to have made any great impression upon his countrymen. No Legislature, however rash and inconsiderate, will venture to make such a change on the laws of a country, unless some preparation has been made for it in the customs and manners of the people in France. Long before the Revolution, the marriages of persons of a certain rank were little better than nominal. This fact is acknowledged by Madame Necker. The mere formal dissolution of marriages, which, in point of fact, no longer existed, is not perhaps to be much regretted. But this is no vindication of the law permitting divorce. Its influence might not be material, either on marriages which were supported by the firm bond of mutual affection, or on those already dissolved by the profligacy of the husband, or the infidelity of the wife. Such laws have little effect on either extremes; but, in every nation, there is a large class of persons who are neither determined in vice, nor resolute in virtue. A sudden innovation on the laws of a country, opens a career to their wavering dispositions, and is likely to produce the worst effects. Milton appears to have been sensible, that, in his time, the opposition he had chiefly to dread, was that arising from the influence of habit and custom. After entreating Parliament to adopt, without delay, the reformation he proposes,† 'lest some other people, more devout and wise 'than we, bereave us this offer'd immortal glory, or wonted 'prerogative, of being the first assertors in every great vindica-'tion,' he says, 'For me, as far as my part leads me, I have 'already my greatest gain, assurance, and inward satisfaction to 'have done in this nothing unworthy of an honest life, and 'studies well employ'd. With what event, among the wise and

* Milton's Works, vol. i. p. 280.
† Doctrine and Discipline of Divorce.

'right understanding handful of men, I am secure. But how 'among the drove of custom and prejudice this will be relisht by 'such whose capacity since their youth run ahead into the easy 'creek of a system or a medulla, sails there at will under the 'blown physiognomy of their unlabour'd audiments; for them, 'what their taste will be, I have also surety sufficient, from the 'entire league that hath been ever between formal ignorance and 'grave obstinacy.'* With whatever contempt even Milton may attempt to treat custom, in matters of this kind, it must ever be considered as the sovereign authority. The relation which laws bear to the customs and manners of a nation, is the real security for their endurance. Where there is this double security, the rashest innovators will hesitate. But where, as in France, establishments of every kind have been long undermined, by changes in manners and customs, to which they were not accommodated, the first shock destroys the crazy superstructure, and, in the general ruin, the morality of the country is destroyed along with the fantastic decorations which formerly concealed its imperfections, without affording it any real support. The arguments on which this question must turn, have long ago been brought forward by Hume, Essay 19, Part I; and Madame Necker does not appear to have made any addition to them.

We have already pointed out the most striking defects in this work, which are of a nature that we should be sorry to see imitated. We have no doubt, that if Madame Necker had resisted her fondness for learned names, her love of similies, and the admiration she appears to have felt for Rousseau's writings, to which she frequently refers, she would have been a very pleasing writer. Almost every page reminds us of these defects; and the reputation of the author makes it more necessary to point them out. In the last part of the work there are some pleasing passages on the consolation which conjugal affection and happiness afford to old age. Another part of it contains an address to Madame Custine, which would be entitled to the praise of eloquence, if it were not overloaded with rhetorical and poetical ornament. It is introduced, after mentioning the example of Ruth and Naomi; and we quote it in the original, as a translation might give but a very imperfect idea of the merits or defects of Madame Necker's style.

'Dans un temps où les mœurs étoient si simples et si pures, les femmes même dont les vertus avoient le plus d'éclat, suivoient cependant la pente naturelle de leur siècle sans y faire époque. Mais vous, gloire de votre sex, charmante et sublime exception à tous ses désordres,

* Milton's Works, vol. i. p. 280.

à toutes ses inconséquences, à toutes ses indépendances, à toutes ses fausses exaltations pour de faux devoirs, je baise les traces de vos pas; je les couvre de fleurs jusqu'à la porte de cette prison que vos larmes vous font ouvrir chaque jour: puisse le charme de vos vertus, pareil à celui de la lyre d'Orphée, fléchir les arbitres de la mort, et présenter un nouvel argument, plus touchant que tous les autres, en faveur de l'identité des époux et de l'indissolubilité du mariage!' p. 44, 45.

We have not observed that the defects we complain of in Madame Necker's style have prevailed to any extent in the writings of our fair countrywoman: the example is, however, dangerous. Though we are not disposed to assign any limits to female acquisitions in literature or erudition, the display of them ought to be attended with some degree of caution. A woman may have read some translations of the classics, with the profound notes of Madam Dacier, or even construed part of Virgil in the original, without being able to afford much instruction to the world. She may be a sort of prodigy in her own circle, without having acquisitions beyond those of a boy of sixteen. Both will be ready, upon all occasions, to name every Roman or Greek they ever heard any thing about; but in their blind and mistaken zeal they will be apt to praise them for those very virtues to which they have least pretensions.

ART. XXIII. *Transactions of the Royal Society of Edinburgh.* Vol. V. Part ii. 1802.

THE first paper in this volume is entitled—

'*Remarks on a Mixed Species of Evidence in Matters of History: With an Examination of a new Historical Hypothesis in the* Mémoires pour la Vie de Petrarque, *by the Abbé de Sade.* By Alexander Frazer Tytler, Esq. F. R. S. Edin. Judge-Advocate of North-Britain.'

THE discovery of a new species of evidence is not one of those every day occurrences in the literary world, which pass before us with a slight notice, or without any observation. In fact, we scarcely remember, any such discovery in the history of human science, unless, perhaps, the philosophy of Bacon may be ranked under this head. The most important inventions of art—the most brilliant improvements of science—the achievements of Archimedes and of Newton themselves—were only successful applications of kinds of evidence formerly used, or happy generalizations of principles previously known in detail. So much has been done, too, with the old sorts of evidence, and so great advances have been made since the logic of Bacon succeeded that of the Schools, that

upon opening this volume, and casting our eyes on the first article, our expectations were raised to the highest pitch. We glanced a delighted eye over the vast space of enlarged science, which we conceived was now to be opened. We beheld all obscurity cleared up, and all doubt removed. We saw, or fancied we saw, new regions of discovery laid open to every industrious adept in this new art; and never doubted, that Mr. Tytler had fallen upon some commodious method for elucidating the Chinese and Egyptian chronologies: or, at least, for ascertaining the guilt and the hunchback of Richard, or the innocence of Mary. Amidst the vast choice of objects to which we conceived our newly acquired lantern might be directed, we were only at a loss to which it should first be turned. It is true we were soon awakened from this reverie, by the candour and fairness of our author, who, it must be confessed, does not indulge his reader with a long dream: for, in the first twelve lines, we are mortified to find, that the '*mixed evidence*' is only what we have hitherto been accustomed to call presumptive or circumstantial proof; and that the canons, in which the description is paraded with no common pomp, amount only to an indistinct and imperfect statement of those ordinary and obvious principles, which regulate the admission of that most common species of evidence. The mixture of fact and criticism is so far from being an original compound, that no modern historian can proceed a single page without it: it is merely arguing by conjecture, from a scanty store of facts, and settling by criticism the admissibility of those facts.

After we had, for a moment, given way to those emotions of disappointment that so commonly fall to the lot of such reviewers as read farther than the title-pages of books, we began to derive consolation, from the hopes that a common tool, in the hands of a skilful workman, might produce a master piece; and that much remained yet to be discovered, accessible to the kinds of evidence in general use. Again we were somewhat disappointed; the use to which the '*mixed evidence*' has been applied is, the ascertaining that the Laura of Petrarch, was a modest maid. While we thought little of such matters, and were expecting the entrance of a grave inquirer into important affairs, there appears upon the stage a courteous knight† (we use the language of his own challenge) clad in *new* armour, tossing down the gauntlet for the sainted Laura, and, muttering a few short sentences as to the rules of the joust, and the greatness of the occasion, he gallantly advances, and lifting up his beaver, bespeaks attention, by exhibiting a *miniature* of his fair (but departed) mistress. He singles out

† P. 125.

a certain discourteous knight, clad in old clerical armour—points his spear against him—arraigns him of blasphemy for having injured the fame of Laura—and dares him to try the proof of that new armour in which our last knight is attired. In humbler phrase, the new evidence is circumstantial evidence; and the new use that is made of it, is to prove that Laura was not a coquette, and Petrarch not a seducer.

We will not dissemble the disappointment which we experienced, upon coming all at once to the full discovery of this circumstance. But, resigning ourselves to our fate, we slowly proceeded in our melancholy vocation; and began to wade through nearly 90 quarto pages of critical disquisition, dictated by the most enthusiastic admiration of the subject, both male and female, indicative of the same chivalrous soul which induced the enterprise, and symptomatic of rather a rancorous spirit of controversy, displayed in obstinate attacks upon the particular principles and morals of the poor Abbé de Sade.*

We acknowledge, however, that we have found the labour lighter as we proceeded. We have been much pleased with the acuteness with which our author refutes the Abbé's fanciful hypothesis. We have experienced much relaxation from the agreeable variety afforded by his elegant and accomplished talents; we soon recognised an old friend, from whose classical acquirements we had frequently before received pleasure; and we approve the virtuous principles which he everywhere displays, although we cannot sympathise in his zeal for Laura's honour, and Petrarch's piety.

Various opinions have divided the learned world upon the subject of Laura. Some have begun at the root of the matter, and questioned her existence altogether. Among those who have most stoutly asserted her reality, some have contended that she was the virgin Mary, while others have insisted, with equal confidence, that she was not only a mere woman, but a strumpet. The Abbé de Sade, again, in later times, has maintained, that she was not exactly a strumpet, but something between a coquette and an adultress; and Mr. Tytler will have her to have been a most pure and unblemished, though a clay-built virgin. For our parts we are little interested in the controversy, and shall not presume to decide upon it. We have derived much pleasure from reading the delightful sonnets of Petrarch. If they were addressed to an image of his own brain, fairer than any actual Laura in nature, we should only the more warmly admire the poetical spirit of that extraordinary personage, and the wonderful command of imagery and fiction which could give such an air of reality and ardour to the expression of a fictitious passion. If Laura was a strumpet, or an adultress, we should blame both her and Petrarch, as moral-

* *Vide* p. 154, 155, and 156.

ists; yet, though we should call down on our heads all the remnant in the vials of Mr. Tytler's wrath (if any remains unexhausted on the Abbé), we must acknowledge that we have received pleasure from the Lydia of Horace, and even from the Alexis of Virgil. Provided an ancient poem contain no apparent violation of propriety in morals, we care very little about the character of its author, and still less about the chastity of the fair one to whom it was addressed: and of Laura, there does not now remain a vestige on earth beyond the verses themselves. The honour of an obscure girl, long forgotten, and, if a real person, many ages ago dead, rotten, and annihilated, appears to us one of the least interesting subjects upon which a learned Society could possibly bestow its attention.—*De gustibus*, &c.

The next article in the collection is—

'*A Description of an Extra-Uterine Fœtus.* By Mr. Thomas Blizzard, F. R. S. Edinburgh, Lecturer on Anatomy and Surgery, and Surgeon to the London Hospital.'

This contains a very concise and clear description (with two most excellent plates) of a singular case of conception. The subject was a woman of 28 years old, who had had some full births, and several miscarriages, particularly one about five weeks before her death. The disease which carried her off, was an uncommon pain and swelling of the abdomen, accompanied by sensations so extraordinary, that she desired her friends to have her body opened after her death. In compliance with this wish, Mr. Blizzard dissected her, and observed particularly that there had been in the fallopian tubes, a small pouch formed, and with a rupture and hæmorrhage from it. The uterus was enlarged, and a quantity of jelly was found extending from the os uteri. The embryo had apparently rested in the fallopian tube, instead of passing into the uterus; and an extra-uterine gestation had there taken place, in consequence of which that tube had burst. Our author, after remarking the singularly small portion of time which had intervened between the last miscarriage, and the new conception of this industrious propagatrix of the species, accounts for the stoppage of the fœtus, by supposing that some irregular and casual contraction of the fallopian tube had taken place, as all the vessels, and the tube itself, were in their natural state.

This interesting article is followed by a *Meteorological Abstract* for the years 1797, 1798, 1799, by Professor Playfair, a gentleman fully known to our readers in various branches of abstruse science. These tables are constructed on a very excellent plan; and we recommend the improvement to all our readers who may

have an opportunity of doing—what so many persons do ill—keeping a register of the weather, in different parts of the country.

We are next presented with a very valuable paper—

A new and universal Solution of Kepler's Problem.

By James Ivory, *Esq.*

Our scientific readers are well acquainted with the celebrated inquiry to which Kepler was led, after the discovery of the law which bears his name. Having proved that the squares of the periodic times are as the cubes of the distances, he wished to discover a method of finding the true place of a planet at a given time—one of the most important and general problems in Astronomy. By a short and easy process of reasoning, he reduced this question to the solution of a transcendental problem:—to draw from a given eccentric point, in the transverse of an ellipse (or the diameter of a circle) a straight line, which shall cut the area of the curve in a given ratio; or, in the language of astronomers, 'from the given mean anomaly, to find the anomaly of the eccentric.'

The most important problem is evidently transcendental; for in the first place the curve in question is not quadrable; and, in the next place, admitting that it were, the solution cannot be obtained in finite terms. As the general question, for all trajectories, is of vast importance; and as this paper contains a most successful application of the utmost resources of algebraic skill to the most important case of it, we shall premise a few remarks upon the problem, when enunciated in different cases.

Let d^2 be the given area of any curve, which is the trajectory of a planet or other body, or which is to be cut in the given ratio of m to n. Let x and y, as usual, be the abscissa and ordinate, and c the eccentricity of the given point, through which the *radius vector* is to be drawn, if the equation is taken from the centre; or if it is taken from the vertex, let c be the distance of the given point from that vertex—as the focal distance in the case of the planets or comets, (supposing the comets to revolve round the sun in parabolas or eccentric ellipses, having the sun in the focus), then it may easily be found, that the following fluxional equation $2\int \dot{y}\,x + y\,(c-x) = \frac{2\,m\,d^2}{m+n}$ if resolved for the case of any given curve, gives a solution of the problem for that curve. Instead of $\int y\,\dot{x}$, there must be substituted the general expression for the area found by integration; and y must then be expressed through the whole equation in terms of x, or x in terms of y. There will result an equation to x or to y, which, when resolved, gives a solution of the problem.

Now, it is manifest, that one or both of two difficulties or impossibilities may occur in this investigation of the value of x. It may be impossible to exhibit $\int y\dot{x}$ in finite terms; and it may be impossible, even after finding $\int y\dot{x}$, to resolve the equation that results from substituting the value of $\int y\dot{x}$ in the general equation above given. Thus, if the given curve is not quadrable, the equation can never be resolved; but, although the curve is quadrable, it does not follow that the equation can be resolved.

In the case of the *circle* and *ellipse*, both these difficulties must of course concur. The value of $\int y\dot{x}$ in the circle being $\int \dot{x}\sqrt{ax-x^2}$, and in the ellipse $\int \frac{b}{a}\dot{x}\sqrt{ax-x^2}$ (where a and b are the transverse and conjugate), neither of which fluents can be integrated in finite terms, the general equations become indefinite or unintegrable.

The *lemniscata*, (a curve of the fourth order) is quadrable; but the resolution of our general equation cannot, in this case, be performed in finite terms; it leads to an equation of the sixth order, very complicated and difficult*. But, if the given point is in the centre or *punctum duplex* of the curve, the equation is a cubic one, wanting the second term, and, of course, easily resolved.

It often happens, too, that the problem may be resolved, in general, for a curve; but that, in one particular part of the axis,

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* The equation is of the following form, a being the lemniscata's semidiameter.

$$\left.\begin{array}{r} +x^6 \\ +6c(1-a)x^5 \\ +\left(9c^2(1+a^2-2a)-a^2\right)x^4 \\ -6ca^2(1-a)x^3 \\ +\left(3a^4-9c^2a^2(1+a^2-2a)\right)x^2 \\ +6ca^4(1-a)x \end{array}\right\} = \frac{12m}{m+n}a^3d^2\left(a^2-\frac{3md^2}{m+n}\right)$$

a cubocubic having all its terms ($x^6+Ax^5+Bx^4+Cx^3+Dx^2+Ex+F=0$) in which A, C, and E, vanish when the centre of motion (or of the *radii vectores*) is in the *punctum duplex*, and then the equation to x is $x^6+Bx^4+Dx^2+F=0$, reducible to the cubic $z^3+\Delta z+\phi=0$. So that the problem is soluble, except when the eccentricity is such that $\left(\frac{\Delta}{3}\right)^3$ is less than $\left(\frac{\phi}{2}\right)$, the irreducible case of Cardan's rule.

the solution becomes impossible. As this is rather a singular circumstance, we shall attend a little more minutely to it.

Let it be required to resolve the problem for the case of comets, supposing those bodies to move in parabolic orbs. The general equation for x becomes $x\sqrt{x}+3c\sqrt{x}=\frac{6}{\sqrt{a}}\times\frac{m\,d^2}{m+n}$; a cubic wanting the second term, and easily resolved. But, in certain cases, viz. when c, the distance of the given point from the vertex, is less than $3\,d\times\sqrt[3]{\frac{m^2\,d^2}{4\,a\,(m+n)^2}}$ the problem cannot be resolved; for, in this case, the cube of one third of the coefficient of x is less than the square of half the last term, which is the well known irreducible case of Cardan's rule. In this case, therefore, the problem of the comet is reduced to infinite series, or to the arithmetic of sines. If the given point is in the vertex of the curve, that is, in the perihelion, the problem is always resolvable, being reduced to the simple extraction of a cube root; and this is the case of comets which fall into the sun.

The resolvable case of the *lemniscata* is in the same circumstances, as may easily be seen by inspecting its equation.

In substituting for $\int y\,\dot{x}$, its value in our general equation, we may either give it in terms of x, that is, of the abscissa; or in terms of $x\,y$, that is, of the circumscribing rectangle, and neglect any farther substitution. Thence arises a different and more elegant solution of the problem, by the intersection of curve lines; for we obtain an equation to a new curve, which cuts the former in the point required. Thus, by such a process in the case of the comet, we obtain the equation $y=\frac{6\,m\,d^2}{(m+n)\,(x+3\,c)}$ to a conic hyperbola. For brevity's sake, put $\frac{2\,m\,d^2}{m+n}=\phi^2$, the equation becomes $y=\frac{3\,\phi^2}{x+3c}$. Therefore, taking a point on the axis at the distance of $3\,c$ beyond the given vertex (or perihelion), erect a perpendicular, and between the two lines, as assymptotes, describe the hyperbola $x\,y=3\,\phi^2$, it will cut the given trajectory in the point required: If the given point is in the perihelion, then the perpendicular must be raised at the vertex of the parabola.

The solution here given by a *locus*, is evidently general, and has no impossible case. But there are some instances, in which such solutions, although perhaps the only practicable ones, are nevertheless attended with an impossible case. Let us take that of the *lemniscata*. Instead of the irresoluble equation of the sixth

order, we obtain, by the last mentioned method, a cubic equation of this form, $y = \frac{(3\phi^2 - 2a^2)x}{3cx - x^3 - 2a^2}$, to a curve of the third order, called, if we rightly remember, by Sir Isaac Newton, in his '*Enumeratio Linearum Tertii Ordinis*,' a *parabolism of the hyperbola*. Now, although this is extremely simple, in comparison of the complex equation given by the direct method first mentioned, it has manifestly one impossible case, viz. when ϕ is equal to $a \times \sqrt{\frac{2}{3}}$, or when the given area is to two thirds of the square of the diameter of the curve, as $m + n$ to m. In this case, no parabolism of the hyberbola can be drawn which will intersect the given curve in the point required; and this is an impossibility affecting every possible value of c, that is, every position of the given point, in this particular magnitude of the given area. But this circumstance makes no difference on the resolution of the problem by the direct method. Thus, when the eccentricity vanishes, or the given point is in the *punctum duplex*, the solution is derived from a cubic equation equally resolvable when $\phi = a\sqrt{\frac{2}{3}}$ as when ϕ is either $< \text{or} > a \times \sqrt{\frac{2}{3}}$.

The method of resolving this interesting problem by *loci*, is the source of an immense variety of the most curious propositions concerning the properties and mutual relations of curve lines; and, more especially, leads us to the discovery of various porisms which we otherwise should never have found out. In order to generalize and extend these, it is necessary that, instead of considering merely the case of Kepler's problem, where an area is cut by a straight line, we should consider also the far more difficult problem of cutting the area of one curve by another curve, in a given ratio; and then the problem may be extended to the section, not of one curvilinear area, but of an infinite number of areas, contained between two given lines, or of the areas of all the curves of a particular kind which can be drawn between those given lines. It is easy to perceive, that the same resolution before adverted to, will not apply to those more complicated problems. But our readers will find a variety of examples of this species of proposition in the Philosophical Transactions of the Royal Society of London for 1798, which were investigated chiefly in the manner above described. It is evident, that the application of such problems to physics, does not proceed so far; for we have never yet discovered an example of a central force acting in a curvilinear direction.

The solutions which we have now described, of Kepler's problem, and of several problems of a more general sort, are of a theoretical nature. They exhibit the mode of expressing by curve lines, or imaginary relations of known quantities, the relation required of the quantities given; they rather vary the difficulty, or simplify the relation, than remove the impediments to practical measurement. If it be required to exhibit the anomaly of the eccentric, we may indeed adopt the solution given by Sir Isaac Newton (*Principia, lib.* i. *prop.* 31. *& Schol.*) or that hinted at by Kepler himself. The Newtonian solution proceeds upon the description of a cycloid, and an easy construction, by which the point required is found in the intersection of a straight line with the given trajectory. In the volume of the Philosophical Transactions for 1798, a solution is given more directly, by the intersection of a species of a cycloid of easy description with the given curves, without any subsequent construction. But these solutions, though more pleasing and beautiful in theory, are useless, when it is required to exhibit a value of the *abscissa* corresponding to the anomaly of the eccentric, or its supplement, in such a manner that a comparison may be made of this line with some known measure of length. It becomes necessary in this case, to find a numerical value of the quantity in question. Now, this can only be done by a series; and the two great objects in finding such a series, are, first, to give one which may be regulated by a simple law; and, secondly, to give one which may converge rapidly, so that its denominators rapidly increasing, the quantities may soon become so small, as not to deserve attention in our computations.

The approximation given by Mr. Ivory in the paper now before us, deserves the first place among those of which we are in possession, whether we consider its simplicity, universality, or accuracy. The series is of easy management, applies to the most eccentric orbits, as well as to those approaching nearer to the circle, and to all degrees of eccentricity in the given point, the centre of forces. It has the benefit, too, of a most rapid convergence.

He first gives a very simple and elegant geometrical method of approximation, by an application of the rectangular case of the general problem *de inclinationibus* of the ancient geometers. But as this is by no means satisfactory to the practical calculator (for reasons before assigned), he proceeds next to the Algebraic solution.

He begins with investigating the series for the eccentric anomaly, when the mean anomaly is a right angle. It converges quickly, and the terms err alternately, by defects and excess, the difference growing continually less and less.

Our author then proceeds to the investigation of a similar series, found in the same manner, for the other cases of the mean

anomaly. We should in vain attempt to give our readers a more minute idea of this solution, without a detail as full as the paper now before us. We shall only note an *erratum* that has crept into the twelfth article. After putting $tan.\ A = e \times \frac{sin.\ \phi}{cos.\ \phi - m} \times sec.\ 45°$ he infers that $sin.\ \frac{\psi}{2} = tan.\ \frac{A}{2} \times 45°$, it should be $sin.\ \frac{\psi}{2} = tan.\ \frac{A}{2} \times sin.\ 45°$

Our author next gives two examples of the application of his method to geometric problems concerning the circle; the one is, to bisect a given semicircular area by a chord from a given point in the circumference. The results of the series which he gives for the eccentric anomaly are as follows:

Eccent. Anom. = 47° 4′ (first value, and less than the truth.)
——— ——— = 47° 40′ 14″ (second value, and greater than the truth.)
——— ——— = 47° 39′ 12″ (third value, and less than the truth).

Our readers will, from this example, perceive the excellence of the method; for, whereas the first two terms differ by nearly 36′, the second and third differ only by 1′ 2″; or, in other words, while, by the two first trials, we come to a space of above half a degree, in some part of which the point required is to be found; by the second and third trials, we obtain a space of about the sixtieth part of a degree, in some part of which lies the result. By the third term of the series, then, we obtain a solution not more than 31″ distant from the truth, and this in circumstances the least favourable.

The other example is a solution of the problem—'to draw from a point in the circumference two chords which shall trisect the circular area.' Here the

Eccent. Anom. = 30° 33′ (first value less.)
——— ——— = 30° 44′ 11″ (second greater).

Euler's solution (*Analysis, Inf.* XI. 22.) differs little more than 30″ from this solution given by our author's *second* term.

This specimen will sufficiently shew to our readers the superior excellency of Mr. Ivory's method. Former analysts have only resolved the case wherein the eccentricity is small; his solution extends to comets as well as planets. For the planets, his rules apply with peculiar accuracy and ease; and his series converges with extreme rapidity; so much so, that we consider the approximation of one term sufficient for practice. He has given a table of the values of the errors (or differences) for the different planets, computed in this way. He adds an exemplification for the famous comet of 1682, supposed to be the same which

re-appeared in 1759. His first approximation for the anomaly of the eccentric, reckoned from the aphelion (16 days 4 hours and 44′ from its perihelial passage), is 173° 51′, and too small. The second approximation is 173° 54′ 36″; exceeding the real eccentric anomaly from the perihelion by only a few seconds.

Our author concludes by shewing how a remedy may be discovered for the difficulties, or rather prolixity arising to his computation, in the cases where the perihelial distance is very small; that is, where the eccentric anomaly, reckoned from the aphelion, is large; and he finds it, from a comparison of the parabolic and elliptic ones, which coincide so nearly in cases of great eccentricity, like those of the comets. We shall here remark an *erratum* in article 17. which has crept into the left hand side of the equation: Instead of $y + \frac{y}{3} =$, &c. it should evidently be $y + \frac{y^3}{3} =$, &c. The author will excuse such minute criticism. We address it to our readers, whom we wish to introduce to this admirable tract; and such trifles often discourage young students in the mathematics: for it is scarcely necessary to add, that mathematical reading is no passive exercise of the mind, but requires almost as much labour as mathematical writing.

The application of our author's last correction, deduced from the comparison of the parabolic and elliptic trajectories, to the finding of the heliocentric place, and also the heliocentric distance (or *radius vector* of the cometic orbit), concludes this paper. We have been the more gratified by a perusal of this last branch of Mr. Ivory's inquiry, because the speculations have formerly occurred in a similar form to ourselves. The introduction of the parabola, which admits of quadrative and of definite solution, so far as regards Kepler's problem, has always appeared to us the surest method of rectifying the computations of the heliocentric places and distances of comets, or of their perihelial eccentric anomalies and *radii vectores*, during the small perihelial part of their trajectories which we are permitted to contemplate. In that part, the eccentric ellipse and the parabola nearly coincide; and, after all, we are not perfectly certain that those singular bodies do not move in orbits strictly parabolic.

We cannot sufficiently recommend this profound and excellent paper to our readers' attention. Looking to the *logical formulas* and historical *demonstrations* of Mr. Tytler, the *mechanical investigations* and *military problems* of Lord Ancram, we again are stricken with wonder at the singular *melange* which the Royal Society has contrived to bring together. Again, turning to the scientific labours of the mathematician, we cannot avoid exclaiming, '*O si sic omnia!*'

The article which follows these excellent and profound speculations, on a most important subject of abstract science, seems to have been admitted into this volume, partly because it is the production of a noble author, and partly because great variety is pleasing in all works. The following is its title:—

'*Description of some improvements in the Arms and Accoutrements of Light Cavalry, proposed by the Earl of Ancram, Colonel of the Mid-Lothian Regiment of Fencible Cavalry, and F. R. S. Edinburgh, to his Excellency Marquis Cornwallis, Lord Lieutenant of Ireland, &c. &c. in a letter to Captain Taylor, Military Secretary to his Excellency.*

Where, in the name of order, are we got now? Among colonels of horse—lord lieutenants—military secretaries—light cavalry—arms and accoutrements! We can read no farther. We have nothing to do with the din of arms; we thought of reviewing the speculations of a learned body of peaceful sages. But so dazzling is a title and a command of horse, that these philosophers, on the noble and gallant inventor presenting his new firelock to them, and demanding admittance for the record of his fame, seem to have answered as the philosopher of old did, upon allowing a great conqueror (a colonel or lord lieutenant of those days) to beat him in an argument, 'What! shall I dispute the point with an opponent who commands 100,000 soldiers?' We solemnly deny having been accessory, even indirectly, to this singular piece of authorship: we have not so much as read more of the paper than the first sentence, in which, however, we find that the noble mechanic is an inventor of words as well as of fire-arms, and he uses '*arm*' in the singular to denote a piece of armour. As this comes under our province, we must remind his Lordship, in the words of an old courtier, (a grammarian or reviewer of Rome, we forget which), that he may raise what new recruits he pleases for his regiment, but cannot be permitted to raise a single new word.

We would propose a question with all possible deference to the Society:—If Mr. Twigg, in a fit of disinterested public spirit, had communicated to them his invention of the new breech, instead of going to the patent office with it, would his paper (even if Lord Ancram had clubbed his share of grammar, orthography, and new words) have been published in this volume?

A new method, &c. By Mr. W. Wallace, *Perth.*

If the present volume of the Edinburgh Transactions contains abundance of matter in which we cannot feel much interested, (perhaps from want of taste and obtuseness of organs), and if it is defiled by some trash that we lament to see admitted among the

speculations of philosophers, it must be acknowledged that the scientific part of the collection is exceedingly rich. The papers of Messrs. Wallace and Ivory, in particular, are sufficiently valuable to atone for many 'Lauras' and 'gun breeches.' We observe, with some patriotic feelings of mortification, that those writers who have, we assert it, kept the Society's books in circulation for several years past, are not even members of an institution, to which they contribute so distinguished, nay, so necessary a share of assistance.

The paper of Mr. Wallace we earnestly recommend to the attention of every reader. We have received the highest gratification from a careful perusal of it; and acknowledge that we have seen few inventions in this favourite department of study, of which we should so much desire to be the authors. It is impossible to give any satisfactory analysis of this tract. The peculiar conciseness and compactness of the noblest science, to the grasp of which the human powers have aspired, renders all ornament of diction and superfluous reasoning or explanation unknown, in its various branches. To enunciate the author's propositions, and to sketch a very general view of the ground over which he carries us, must be the limit of our exertions in a path where all elucidation is rendered unnecessary by its own clearness—all improvement or abridgment impossible, by its own solidity and shortness.

Let a and b denote the heliocentric distances of any two planets from the sun, and φ the angle of commutation. In computing the effects of the reciprocal influence exerted by the reciprocal gravitations of the planets on each other's motions, we are led to an algebraical formula $(a^2+b-2\,a\,b\,\cos.\,\varphi)^n$; and it is required to develope this expression, by resolving it into a series of the following structure: $A + B\cos.\varphi + C\cos.2\varphi +$, &c. proceeding by coefficients D, E, F, &c. which are required, and by cosines of a regularly increasing angle of mutation φ. Now, the determining of those coefficients by circles or logarithms, (or of A and B, after which the rest are easily found), has hitherto defied all the resources of mathematical skill; and the series used for this purpose have been found of the most difficult management and slow convergence. Mr. Wallace here presents us with a solution, the result of one of those happy contrivances, which, from their late invention, and admirable simplicity, we might be disposed to ascribe to good fortune, did we not invariably find that they fall to the lot of those only who are possessed of the powers unquestionably required for turning them to good account. Mr. Wallace's method consists in resolving the series into a fluxionary form, and comparing the fluxions with the fluxionary expressions of elliptic arches. The calculus is thus reduced to that of the proportions between elliptic arcs, and the corresponding arcs of their circumscribing circles.

Our author first demonstrates, that A and B being found, C, D, E, &c. may be deduced; and he shews how A and B may be so expressed as to bring their evolution home to the rectification of elliptic arches.

He takes the case of $n = -\frac{3}{2}$, the most usual one in physical astronomy, (as our readers well know); but n may be any odd number, positive or negative, divided by two, as $-\frac{5}{2}$ (another usual case in astronomy) $+\frac{1}{2}$, &c. Then, let ϖ = semiperimeter of the circle whose radius is unity; $\epsilon = \frac{b}{a}$; ϕ = angle of commutation; a and b the heliocentric distances: he shews that

$$\varpi a^3 A = \int \frac{\phi}{(1+\epsilon^2-2\epsilon\cos.\phi)^{\frac{1}{2}}} \text{ and } \varpi a^3 B = \int \frac{2\phi\cos.\phi}{(1+\epsilon^2-2\epsilon\cos.\phi)^{\frac{1}{2}}}.$$

The fluents increasing, as ϕ increases from zero to ϖ; and e being put $= \frac{4\epsilon}{(1+\epsilon)^2}$, he deduces the following equation:

$$\varpi a^3 A = \frac{1}{(1+\epsilon)(1-\epsilon)^{\frac{1}{2}}} \int \phi \sqrt{1-e^2\cos.^2\frac{\phi}{2}}.$$ A circle is now taken, whose diameter is $= 2$; and upon this, as a transverse axis, an ellipse is described, whose eccentricity is $= e$. Now, at this point of the process is perceived the jet of our author's invention; for the circular arch being put $= \frac{\phi}{2}$, the fluxion of the corresponding elliptic arch $= \frac{1}{2}\dot{\phi}\sqrt{1-e^2\cos.^2\frac{\phi}{2}}$ (which occurs in the value found for A); and when $\phi = \varpi$, that is, when the arch $=$ the semiperimeter, then $\int \phi \sqrt{1-e^2\cos.^2\frac{\phi}{2}} =$ semiperimeter $= E$, and by resubstitution $A = \frac{1}{(a+b)(a-b)^2} \times \frac{E}{\varpi}$; the eccentricity $= \frac{2\sqrt{ab}}{a+b}$, and the semiconjugate $= \frac{a-b}{a+b}$.

In like manner, B is found $= \frac{2a}{b} \times A - \frac{2}{b(a^2-b^2)} \times \frac{E'}{\varpi}$ E' being the semiperimeter of a second ellipse, and its semiconjugate $= \frac{\sqrt{a^2-b^2}}{a}$.

Our author next shews how the ellipses may be chosen of any convenient eccentricity, since, indeed, it is not on absolute, but relative magnitudes of arcs, that this solution depends.

He now gives the substance of his method in plain and simple practical rules for computation, which our readers will easily deduce from the preceding statement. He then discusses the mode of

finding a convenient rectification of elliptic arches. Euler's series converges by the powers of the semiconjugate, and answers for cases of small eccentricity: Mr. Ivory's by the difference of the axes divided by their sum; and this answers for considerably eccentric curves. Our author adds a new method, of infinite ingenuity, and particularly adapted to his present purpose, from its rapid convergence in every possible case, and from its power of expressing the ratios of the ellipsis to their circumscribing circles.

The paper concludes with an Appendix, or rather a separate and valuable tract, containing the investigation of a new formula for the rectification of all elliptic arches. We shall only mention the result of this long and skilfully conducted analysis.

Let the semitransverse axis = unity; e = eccentricity; z = any arch reckoned from the extremity of the axis; ϕ = the corresponding arch of the circumscribing circle; $\epsilon = \frac{1-\sqrt{1-e^2}}{1\times\sqrt{1-e^2}}$; $\epsilon' = \frac{1-\sqrt{1-\epsilon^2}}{1+\sqrt{1-\epsilon^2}}$, &c. so on for $\epsilon'''\ \epsilon^{iv}$, &c. Also $sin.\ 2\ \phi' = \frac{sin.\ 2\ \phi}{(1+\epsilon)\sqrt{1-e^2\ sin.^2\phi}}$

$sin.\ 4\ \phi' = \frac{sin.\ 4\ \phi'}{(1+\epsilon')\sqrt{1-\epsilon^2\ sin.^2\ 2\ \phi'}}$, &c. so on for $sin.\ 8\ \phi'''$;

$sin.\ 16\ \phi^{iv}$, &c.; e, ϵ, ϵ', &c. approach quickly to zero, and ϕ, ϕ', ϕ'', &c. to a certain limit θ.

Let $P = (1+\epsilon)(1+\epsilon'')(1+\epsilon''')+$, &c.; $Q = \frac{e^2}{2} + \frac{e^2\epsilon^2}{4} + \frac{e^2\epsilon^2\epsilon'^2}{8}+$, &c.

and $R = \frac{e(1+\epsilon)}{4}\ sin.\ 2\ \phi' \times \frac{e\epsilon(1+\epsilon')(1+\epsilon'')}{16}\ sin.\ 4.\ \phi''$, &c.; then our author's proposition is, the arch or $Z = \theta\ P\ (1-e\ Q) + e\ R$.

When ϕ = a quadrant, $\theta = \frac{\pi}{2}$, and E being the elliptic quadrant, $E = \frac{\pi}{2} P\ (1-e\ Q)$, and $Z = \frac{2\theta}{\pi} E + R$. Whence our author deduces *Fagnani's theorem* of assignable differences, and shews the application of his formula to the demonstration of various important transcendental properties of the circle and ellipse formerly known, and to the discovery of new truths of the same kind. He concludes with a numerical calculation, which exemplifies his method of rectification, and proves at once its extreme accuracy and simplicity.

We cannot conclude, without expressing our sincere admiration of this excellent performance—excellent in every respect: and, trifling as it may appear to mathematicians, remarkable for a pure,

perspicuous, and not inelegant style. It is a paper, equal, in our opinion, to whatever has been most admired of the greatest analysts. We remember nothing in the works of Euler or La Grange which belong to a higher class of excellence in this science.

Whilst so much remains yet to be done for the Mathematics by all nations; and to take a more contracted view, while so much is wanting in this country to render us at all fit for competition with the mathematicians of the Continent, any such appearance of high pre-eminence in this line, as we have now been contemplating, delights us—in a degree, we fear, to which we are not likely to be followed by the sympathy of all our readers.

The last article in this volume is entitled—

'*Chemical Analysis of an Uncommon Species of Zeolite. By Robert Kennedy, M. D. F. R. S. E. A. S. and Fellow of the Royal College of Physicians, Edinburgh.*

This zeolite, found in the rocks of Edinburgh Castle, was chiefly distinguished by a phosphoric quality, giving light in the dark, when gently struck or heated, like the Tremolite mentioned in the first volume of Saussure's *Voyages dans les Alpes*. Dr. Kennedy examined the composition of it; and found, by various experiments which we shall not attempt to analyse, that 100 parts of the zeolite contain, of silex 51.5; lime 32; argil .5; oxyd of iron .5; soda, about 8.5; carbonic acid and other valuable matter 5; with some traces of magnesia and muriatic acid.

This short, but excellent paper is marked by that perspicuous detail of experiments, and that neat and elegant mode of conducting and devising chemical analysis, which so eminently distinguish all the researches of this very able chemist.

NOTE TO CORRESPONDENTS.

We have to return our acknowledgments to a great number of valuable Correspondents, some of whom will perceive, from the present Number that their hints had been anticipated. The offers of others, we are sorry to say, appear wholly unsuitable to our plan. We may perhaps take more particular notice of some articles of correspondence in a future Number.

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